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Pennsylvania

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1956

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UNIVERSITY CALENDAR

1956

June 11-16	Registration for Undergraduate Summer Session
June 18	Undergraduate Evening Summer Session begins
June 18-23	Registration for Graduate Summer Session
June 25	Graduate Evening Summer Session begins
July 4	Independence Day—Holiday
July 31	Feast of St. Ignatius—Holiday
August 10	Undergraduate Evening Summer Session ends
August 15	Feast of the Assumption—Holiday
August 18	Graduate Evening Summer Session ends
September 10	Freshman Registration and Orientation
September 11-14	Upperclass Registration—Freshman Orientation
September 17	Fall Semester begins—Day, Evening, and Graduate Sessions
September 18, 19, 20	Student Retreats
September 21	Mass of the Holy Ghost—Student Convocation
November 1	Feast of All Saints—Holiday
November 9	End of First Quarter
November 22, 23, 24	Thanksgiving Holidays
December 8	Feast of the Immaculate Conception—Holiday, Graduate Sessions
December 19	Christmas Holidays begin (after last class)

1957

January 7	Classes resume
January 18	End of Second Quarter
January 21-26	Semester Examinations
January 28-February 2	Semester Vacation—Spring Registration
February 4	Spring Semester begins—Day, Evening, and Graduate Sessions
February 22	Washington's Birthday—Holiday
March 29	End of Third Quarter
April 17	Easter Holidays begin (after last class)
April 24	Classes resume
April 26-27	Comprehensive Examinations
April 27	Last day to submit graduate thesis
May 20-24	Senior Examinations
May 27-31	Semester Examinations
May 30	Ascension Thursday—Memorial Day—Holiday
June 1	Graduate Session closes
June 1	Baccalaureate Mass—Class Day Exercises
June 2	Commencement

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General Information

HISTORY

The University of Scranton, the first Catholic institution of higher education in the Northeastern counties of Pennsylvania, was known as the College of Saint Thomas at its foundation in 1888. Under the laws of the State it was chartered on January 12, 1924, to confer Bachelor's and Master's degrees in the Arts and Sciences. Fourteen years later Saint Thomas College became the University of Scranton. In 1942 the University of Scranton became the twenty-fourth of the twenty-eight colleges and universities in the United States under the direction of the Society of Jesus.

LOCATION

The University is in process of relocation from its original site on Wyoming Avenue, near the center of the city, to the area of the Scranton Estate which was the generous gift of Mr. Worthington Scranton. Remaining temporarily at the Wyoming Avenue location are the administrative offices and library in Old Main Building and the offices of the President in the adjoining La Salle Hall.

The new Science Building on the Scranton Estate will house all science laboratories and lecture halls including the radio station. In the same area are the Liberal Arts Building; the Business Administration building, the site of which was donated by Attorney M. J. Martin; the student union building; three student residence halls, and the Jesuit faculty residence. On May 18, 1945, the University acquired title to a tract of land of eight and a half acres, the gift of Mr. E. P. Dietrick; and in 1955, two plots of ground at Quincy Avenue and Linden Street, the gifts of Mr. and Mrs. Nathan B. Epstein and the Scranton Lodge of Elks; three houses on Quincy Avenue were also acquired in 1955, and the late Joseph Casey residence at Clay Avenue and Linden Street.

THE OBJECT AND PURPOSES OF THE UNIVERSITY

The University of Scranton, as one of the family of 28 colleges and universities administered by the Society of Jesus throughout the United States, shares with them their common educational objectives.

The principal objective of the University is: (1) to lead the student to understand and to inspire him to fulfill that complex of dignities and responsibilities which Man is, as a person and as a member of human society, under God; (2) harmoniously to develop all his powers of soul and body, under the influence of Divine Grace, by methods of teaching which will form habits of correct and vigorous thinking, and of courageously effective and virtuous acting.

Specifically, as the university in this community, the University of Scranton has as its purpose to prepare its students to be thoughtful and effective citizens serving their community in careers in the medical, legal and educational professions, in business, industry and commerce, in social and governmental services, as members of the clergy, in communication arts, and in science and research.

Toward the attainment of this end, the University requires that its undergraduate candidates for degree complete studies in language, literature, history and the natural sciences, and fulfill disciplines in scholastic philosophy and theology,* as a necessary cultural foundation upon which study in special fields may be built.

The method of attaining its objective is based upon the *Ratio Studiorum*, the Jesuit Code of Liberal Education, which was first adopted in 1599 after more than thirty years of co-operative experiment and study, and thereafter thoroughly revised from time to time to meet changing needs and conditions, notably in 1832, in 1893, in 1930 and most recently in 1948. This method provides for: (1) clear-cut organization of successive objectives to be obtained by the student; (2) frequent occasion for stimulating the student to organize in his own mind the knowledge he has thus far gained; (3) prevention of any attitude of passivity or mere absorption, by the use of objection and discussion as an essential part of the teaching technique; (4) continual urge to self-expression in accordance with the ideals of intellectual and moral order; (5) personal interest in the student, spurring him on and encouraging him to do his individual best to acquire both learning and virtue.

*Theology required of Catholic students only.

RELIGIOUS TRAINING

No matter how solid and thorough the intellectual training of the student it needs to be supplemented by an equally complete training in religion and morality if education is to fulfill adequately its function of perfecting human nature and thus preparing the student for a fruitful life after leaving college. The more highly trained a man is, the greater his potentialities for good or evil; and consequently the more important the role of religion with its incomparable power to instruct the conscience and to strengthen the will in the ways of private, social and civic virtue.

One of the phases of religious training at the University consists in formal instruction, given during class periods, as an integral part of the curriculum. Since religious truths form a body of doctrine that can be taught and studied as exactly and scientifically as other branches of human knowledge, the courses in religion are conducted as regular lecture courses with recitations and examinations. The courses are so distributed over the four years of college that the entire field of Christian dogma and morals is adequately surveyed.

In addition to the courses in religion, obligatory for all Catholic students, the growth of a spirit of manly piety is encouraged by voluntary participation in various religious devotions and practices. Holy Mass is celebrated in the Chapel; Benediction of the Blessed Sacrament, Devotions to the Sacred Heart and to Our Blessed Lady and other liturgical functions are held at frequent intervals. All Catholic students are expected to receive the Sacraments frequently, weekly and even daily when possible, and to make the exercises of a three day retreat which is held annually.

In the admission of students no discrimination is made on the grounds of religious belief. Students, not of the Catholic faith, are exempted from attending classes in religion and from participating in religious exercises conducted by the University, though they may attend them if they so desire.

THE COUNSELING PROGRAM

One of the characteritic features of Jesuit colleges for many years has been the Student Counselor. His principal duty is to direct the spiritual activities of the University, and the various

religious organizations associated with it. He is, in a special sense, the friend and adviser of the students, not only in religious matters but, also, in their social duties and in other personal matters. The office of the Student Counselor is on the First Floor of the Business Building, and it is open to the students on every class day.

THE GUIDANCE DEPARTMENT

This Department was instituted as a service to the students, to the Faculty, to the Student Counselor, and the Administration, whenever there should be need of its facilities. The Department is staffed by competent, professionally trained men. The Guidance Offices are on the Second Floor of the Main Building and the First Floor of the Business Building.

The Guidance Department offers a counseling service on educational, vocational, and personal matters. Students are tested and counseled on their aptitude for college work, on their correct placement in the curriculum, on their reading techniques; they are advised on their capabilities for professional studies, such as, law, engineering, journalism, medicine, etc.; their study habits are diagnosed, arranged into patterns of activity, and remedied, when necessary. In general, the Guidance Department concerns iteself with educational, vocational, and personal problems connected with college life inasmuch as it can by those testing and counseling facilities. A special testing program is offered annually to the students of Freshman and Sophomore year.

The Department has a pre-college, in-college and post-college service for all students. All three involve testing and counseling, the testing being performed by the administration of aptitude, achievement, interest and personality tests. A professionally trained Staff administers, interprets, and evaluates the testing results. Educational guidance is offered by over 30 part-time counselors, who are also members of the University Faculty.

Part of the Department's specialized work involves a diagnostic and remedial reading course for those who either want to enlarge their acquaintance with a wider range of reading techniques, or for those who have had little training thus far, and need to acquire facility for the intense college reading program. Special help is offered also to students suffering from speech defects.

The Department also offers, on a limited scale, testing and counseling services to business and industrial firms in the city.

THE LIBRARY

The Library of the University of Scranton serves the students and the faculty in instructional matters and in research through the existing collection of the main library, located on Wyoming Avenue, and a special collection including many spiritual works housed at the Scranton Estate, 4 Ridge Row. Books from this special collection are available through loan at the main library.

Established in 1926, the main library has a collection of more than 44,000 volumes and upwards of 340 literary, scientific, and professional periodicals are currently received. In addition to the University Library, the students may use the resources of the Scranton Public Library and other college libraries in the area.

The staff of well trained librarians is prepared to give individual and informal instruction, so that any student with a special research problem may receive efficient service. It is highly recommended that all students should be aware of the educational and cultural value derived from a thorough acquaintance with the Library collection and tools.

The Main Library, located on the third floor of the Main Building, is open daily during the Fall and Spring semesters from 8:30 A.M. to 9:30 P.M., Monday to Thursday; 8:30 A.M. to 5:00 P.M., Friday; and on Saturdays from 9:00 A.M. to 3:00 P.M. The Library is closed on Sundays and officially designated school holidays. All alumni and friends of the University of Scranton are welcome to use the Library for reference and to borrow books.

The proposed expansion program of the University of Scranton provides for the transformation of the present Scranton Residence into the Library. An additional contemporary structure will contain reading rooms and stacks while the existing building, retaining the present beautiful interior, will provide ideal space for seminar and reading rooms, departmental offices and facilities, as well as student lounges and studies. The completed Library, blending a tradition with a vital need, will be the heart of the University.

BEST SELLERS

The Library of the University of Scranton edits and publishes *Best Sellers*, a book-reviewing service. The purpose of this review is to assist individuals as well as libraries in making an intelligent selection of modern literature. The Reviewing Staff is composed of experts in the various fields of writing and is drawn from more than thirty colleges and universities in the country.

OUT-OF-TOWN STUDENTS

The University provides rooming accommodations for out-of-town students in the student residence hall situated on the campus. All out-of-town students are obliged to live in these halls. The single exception to this requirement will be made in the case of those out-of-town students who will be living with relatives in Scranton while attending the University. Permission to live outside the residence halls must be obtained from the Dean of Men before the beginning of the school year. Room and board rates of $16.00 per week are to be paid in advance either by the week or by the semester or for the full year. This fee provides for the room for the full week, and for breakfast and dinner in the University cafeteria Monday through Friday. Students who remain on campus over the week-ends may obtain their meals in any of several restaurants located within walking distance of the University. All inquiries about the residence halls should be directed to the Dean of Men.

INSTITUTE OF INDUSTRIAL RELATIONS

On October 19, 1943, in Hazleton, Pa., the University of Scranton opened the first unit of its Institute of Industrial Relations. It was called Hazleton Labor College. Later two other divisions were added to the Institute, viz.: the Shenandoah Institute of Industrial Relations in Shenandoah, Pa., which was inaugurated on March 15, 1945, and the Scranton Institute of Industrial Relations, which held its first assembly on May 2, 1945. The Shenandoah and Hazleton divisions were discontinued in 1954.

It is the purpose of all of the divisions of the Institute to provide opportunity for both employees and employers to acquire a

sound philosophy in industrial relations, an acquaintance with the methodology of Social Science, a knowledge of the provisions of labor legislation and skill in written and vocal expression. It is hoped that by spreading a better understanding of the underlying principals and factual data of industrial relations the groundwork will be laid for enduring industrial peace.

Lecturers include members of the regular faculty of the University and specially engaged experts in specific fields. The regular courses are supplemented by occasional lectures by members of the staffs of various departments of the Federal Government, of the Commonwealth of Pennsylvania and of labor and employer organizations.

The student body includes international and district officers and board members of labor organizations, officials and committee members and rank and file members of locals; foremen, superintendents, personnel directors and professional persons.

In the Fall of 1954, the Institute broadened its scope of activities to provide educational opportunity for adults other than those interested in the relatively narrow field of Industrial Relations. It now offers short term non-credit courses in English, Literature, Languages, Philosophy, Theology, Psychology, Government. These courses are offered under the title, "Institute for Adult Education."

RESERVE OFFICERS TRAINING CORPS

The Department of the Army approved the establishment at the University of Scranton of a Branch General Unit of the Reserve Officers Training Corps in September, 1951. It consists of a four-year program with basic courses in the first two years and advanced courses in the last two years. The primary objective of the R.O.T.C. system of education is to qualify selected students to be commissioned reserve officers in the Army of the United States.

Every physically qualified Freshman is required to enroll in the basic course, where he may learn the fundamentals of intelligent citizenship and be given such general basic military training as will benefit him and the service when he becomes a member thereof, and finally to afford him a means for practical training

in organization, leadership and discipline which will be of value to him in his career. Enrollment in the advanced course is optional. Two credits per semester toward a degree are allowed for basic training and three credits per semester are allowed in the advanced courses. Full particulars concerning the program will be furnished by the Professor of Military Science and Tactics.

PLACEMENT BUREAU

The Placement Bureau was established to render service to all University of Scranton students and alumni who register with the Bureau. Undergraduates and alumni registrants are given every possible assistance in finding satisfactory employment. From time to time, especially during the spring term, employment officers of large corporations arrange through the Placement Bureau to come to the University to interview Seniors with regard to prospective positions with their organizations. The offices are located at No. 9 Platt Place.

RADIO STATION WUSV

The University of Scranton operates its own non-commercial educational FM broadcast station, WUSV, licensed by the FCC for broadcast on Channel 210, 89.9 mc. WUSV began broadcast operations on October 1, 1950, and has been in continuous operation since. In the autumn of 1956 WUSV moved into new quarters in the penthouse atop the new Science Building on the Scranton Estate, to resume broadcasting with increased power and antenna height. The station operates on a six hour daily schedule beginning at 5:00 P.M.

Technical and production details incident to the operation of WUSV as a typical radio station are handled by the student members of the Radio Guild under faculty direction. WUSV is a member of the National Association for Educational Broadcasters, the Association for Education by Radio and Television, and the International Goodwill Network.

General Regulations

Students obviously enter the University with the sincere and earnest purpose of obtaining all the benefits of a college education. To enable them to do so, to secure the order necessary for the effectual pursuit of studies, to develop and strengthen character and to promote gentlemanly deportment and polite manners, the University has drawn up certain rules and regulations governing student life. While the observance of these regulations is largely a matter of student morale, they are enforced unflinchingly whenever necessary. Matters of discipline are supervised by the Dean of Men.

While the University cannot be held responsible for the conduct of students outside the premises, nevertheless unbecoming conduct either on or off the campus, as well as insubordination, continued inapplication to studies or irregularity in attendance, will constitute grounds for dismissal from the University. In general both within and outside the University students are expected to manifest the respect for order, morality, personal honor and the rights of others, which is the hallmark of a gentleman and the duty of a good citizen. The Administration reserves the right to dismiss a student at any time without any definite charge, if in its opinion he fails to use profitably the opportunities offered him at the University or to conduct himself according to its standards.

ATTENDANCE

The University considers regular attendance at all classes one of the most important obligations of the student. Every student is required to attend all the scheduled exercises of his class. A limited number of absences for grave and legitimate reasons is permitted. Should a student be absent more frequently than double the number of credits in a given course he incurs an automatic failure. Each student should keep an account of his absences. Failure to do so will not excuse him from the above penalties. Whenever a student has been unavoidably absent for a prolonged period because of illness or an equally compelling reason the application of this rule may be modified upon the recommendation of the instructor with the approval of the department head. Not only

must attendance at classes be regular but it must be punctual. Late comers are not to be admitted and will be recorded with an absence. With the approval of the department head make-up tests may be given during the term but they may not be marked on a basis higher than a maximum grade of 75%.

EXAMINATIONS AND GRADES

Final grades are determined by the instructor on the basis of the student's homework, recitations, tests and final comprehensive examination. The standing of students at the quarter is to be ascertained from the instructor. Deficiency warnings will be mailed at the quarter to students doing unsatisfactory work.

All students are required to pass a comprehensive examination in each subject at the close of each semester.

The system of grading is based on the letters A, B, C, D, E and F. These letters are evaluated according to the following scale:

A 93-100	indicates not only high achievement, but also a high degree of intellectual initiative and creative work	3 quality points for each credit hour
B 85-92	indicates attainment above the average	2 quality points for each credit hour
C 77-84	indicates medium or average attainment	1 quality point for each credit hour
D 70-76	indicates attainment below average but passing	0 quality points for each credit hour

E — Conditioned Failure. This grade is assigned to a student who, in the opinion of and at the discretion of the instructor and after having completed all semester exercises, narrowly fails to achieve a passing grade; or to the student who, after achieving a passing average in all other semester exercises narrowly fails to achieve a passing grade in the final examination. It is a temporary grade, and after a single condition examination will be replaced on the record by a final grade indicating that the student has passed satisfactorily or that his failure is complete. The

highest mark on the condition examination is D. However, the semester grade may be higher. The condition grade must be removed within two weeks from the end of the semester.

F — Complete Failure, with no privilege of re-examination and with the obligation of repeating the course if permitted to remain in attendance.

WX — Withdrew before judgment could be formed.

WF — Withdrew failing.

WP — Withdrew passing.

Inc — Course requirements incomplete. The incomplete grade must be removed by completion of the remaining requirements by the end of the semester after which it has been incurred.

QUALITY OF WORK

A grade average of "C", or a quality point index of 1.0 is required for graduation.

The quality index of a student is determined by dividing the total number of quality points earned by the total number of earned credits.

HONOR STUDENTS

To be eligible for honors a student must carry the full program of his class. All semester hours in which a student receives a grade are counted in the determination of honors. In order to be listed as honor students a grade of "B" or higher must be earned in each subject.

DEAN'S LIST

At the termination of each semester, the Office of the Dean of Studies publishes a list of all students who have earned academic distinction. In order to be placed on the Dean's List, a grade of not less than "B" must be earned in each course.

DEFICIENCIES

No student will be classified as a Senior who has not removed all deficiencies or who has not earned the necessary number of

quality points. Any member of the Senior Class who incurs one failure or two conditions shall cease to be a candidate for a degree at the next commencement.

A student who has accumulated three failures at the end of a semester shall be dismissed.

VOLUNTARY WITHDRAWAL

A student who withdraws voluntarily from the University is entitled to honorable dismissal if he is in good standing and has settled all his financial indebtedness. Students who intend to withdraw from the University are obliged to notify the Registrar in writing of their intention to do so.

STUDENT EXPENSES

Unless it is explicitly stated otherwise, tuition and fees are for one semester and are payable on registration.

Deferred payments are allowed only in rare cases and must have the direct approval of the Treasurer before registration. A fee of $5.00 per semester is charged for this service. Deferred payments are made by paying $150.00 at the beginning of the semester and the balance in payments due the first of two following months.

The University reserves the right to refuse admission to classes to any student not complying with deferred payment regulations.

TUITION

Tuition per semester is $250.00. This tuition permits a student to carry the number of credit hours as indicated for his course in pages 54 to 69 of this catalog. Extra credit hours are chargeable at the rate of $15.00 per semester hour of credit. Students whose combined number of credit hours is 10 or more in any session or combination of sessions shall be charged full tuition and fees. Full time Day students who have permission to take additional work in the Evening will be charged at the rate of $15.00 per semester hour for all courses taken in the Evening Session.

REFUNDS

In the event a student discontinues training the following schedule of pro rata charges for tuition and fees will be made:

Period of Attendance	*Percentages to be Charged*		
	16-19 wks.	9-11 wks.	6-8 wks. inc.
One week or less	20%	25%	40%
Between one and two weeks	20	50	80
Between two and three weeks	40	75	100
Between three and four weeks	60	100	100
Between four and five weeks	80	100	100
Over five weeks	100	100	100

In order to obtain a refund, notice of withdrawal must be reported in writing to the Treasurer.

SPECIAL REGULATIONS

No student will be permitted to take semester examinations until all his bills for the current semester have been paid. No student shall be permitted to receive any degree, certificate or transcript of record, until his financial accounts with the University have been satisfactorily settled. Students are responsible for all breakage in the laboratories.

SUMMARY OF TUITION AND FEES

DAY SESSIONS

Tuition per semester	$250.00
Ordinary Fees	
*University fee per semester	25.00
Matriculation fee (payable once)	5.00
Registration fee per semester	5.00
R.O.T.C. deposit fee (returnable)	15.00
Retreat fee, (Freshmen, Seniors)	15.00
Examination and Mimeograph materials per semester	2.50
Special Service Fees	
Late registration fee	5.00
Deferred payment fee per semester	5.00
Transcript of record	1.00
Change of course or schedule after registration	1.00

Condition examination fee per course	5.00
Remedial Reading Course	10.00
Extra courses per semester credit	15.00
Laboratory Fees (only for those using laboratories)	
Each Science course per semester	15.00
Accounting laboratory fee per semester	5.00
Statistics laboratory fee per semester	5.00
Engineering laboratory fee per semester	10.00-15.00
Breakage fees	actual
For Seniors Only	
Yearbook	10.00
Graduation fee	30.00
Estimated cost of books, supplies, equipment per year	40.00 to 90.00

*The University Fee covers extracurricular activities, intramural sports, testing and personnel services, placement service, admission to athletic events, subscription to *The Aquinas*, etc.

REQUIREMENTS FOR ADMISSION

The administration of the requirements for admission to the University of Scranton is in the hands of the Chairman of the Board of Admissions. The executive details are administered by the Registrar, who will furnish application blanks and information to prospective candidates, parents and secondary school principals. It will be to the candidate's advantage to make formal application early in the final year of his secondary school studies. At the very latest application should be made at least two months before the start of the semester.

In the acceptance of candidates final decision rests with the Board of Admissions. Candidates are advised that in determining the admission status of an applicant the Board will consider not only the credits and mental proficiency of the candidate but also such factors as character, personality and good citizenship.

All applicants will be required to submit to a battery of tests to be used by the Board of Admissions in evaluating their mental

qualifications for the course of study for which they are applying. The scores earned in these tests and the relative standing in the applicant's high school class will be the principal factors used in determining his acceptance for admission to the University.

SCHOLASTIC CREDENTIALS

Candidates for admission to the freshman class must present: first, a certificate of graduation from a senior high school accredited by the State Department of Education of Pennsylvania or by the Association of Colleges and Secondary Schools of the Middle States; and, secondly, a detailed record of their high school work. This record must represent either sixteen units distributed over four full years, if the applicant comes from a four-year high school or twelve units if he comes from a senior high school. Each unit represents the study of a high school subject for the duration of a school year of at least thirty-six weeks, on a basis of four to five recitation periods a week. These units must cover the prescribed subjects which are listed as requirements for admission to the various curricula.

ADVANCED STANDING

The institution honors credits toward advanced standing from other accredited colleges, provided a grade of "C" or its equivalent is presented. No one, however, will be admitted to a standing higher than that represented by a completion of the junior year. To be eligible for a degree a year of residence is required. Students entering from other institutions shall be required to make up the prescribed subjects of study in the course which they choose to pursue.

The candidate must present a letter of honorable dismissal and a certificate signed by the proper college authority, showing the subjects studied, the number of semester hours given to each subject and the grade attained. In case the character of a student's work in any subject is such as to create doubt as to the quality of that which preceded, the University explicitly reserves the right to revoke any credit assigned on credentials and to exact examination in the same subject.

UNIT REQUIREMENTS FOR ADMISSION

To enroll in any one of the several courses offered in the curriculum a total of sixteen high school units must be presented. The term, "unit," is understood to represent a course of from four to five hours weekly throughout an academic year of secondary school. Candidates for admission may submit entrance units in the following subjects:

American History	1	Italian	2
Ancient History	1	Spanish	2
Mediaeval History	1	Algebra	2
Modern History	1	Commercial Mathematics	1
Civics	1	Plane Geometry	1
Economics	1	Solid Geometry	1
Problems of Democracy	1	Trigonometry	1
Social Science	1	Mechanical Drawing	1
English	4	Business Subjects	2
Greek	3	General Science	1
Latin	4	Biology	1
French	2	Chemistry	1
German	2	Physics	1

COURSE REQUIREMENTS

All courses: 16 units, including English 4, *Modern Language 2, Science 1, American History 1, Mathematics 2, others 6. For B.S. in Physical Science, 2 units of Mathematics must be Algebra and Plane Geometry. Candidates for admission to the Pre-Engineering Course must present two units of Algebra, 1 unit of Plane Geometry, ½ unit of Trigonometry and 1 unit of Physics in addition to the other required units.

* Candidates without secondary school credit in a modern foreign language must register in one of the elementary courses and continue their study of the language during Sophomore Year.

At the beginning of the freshman year a placement test is given to students offering two years or more of high school credit in a modern language. Students passing this test will be admitted to the intermediate course in that language. Students failing in this test, and students admitted with less than two units in a language, are required to take the elementary course in that language.

German is the prescribed language for candidates for the Bachelor of Science Degree in Chemistry and Physics. Students planning post-graduate work on attaining the Bachelor's Degree are advised that French and German are the languages usually required of candidates for advanced degrees.

College Degrees

The College of Arts and Sciences at the University of Scranton awards four academic degrees, Bachelor of Arts, Bachelor of Science, Master of Arts in Education and Master of Science in Education. The various courses of study are arranged in two main groups, each one leading to one of these degrees. The Bachelor of Arts course affords the student the opportunity to major in Classical Languages, Education, English, History or Social Sciences. Within the Bachelor of Science group various subdivisions are found depending on whether the student is majoring in Accounting, Business Administration, Biology, Chemistry, Economics, Education, Electronics, English, History, Mathematics. Philosophy, Physics, Political Science, Psychology or Sociology.

BACHELOR OF ARTS DEGREE

The course of studies terminating in a Bachelor of Arts degree is characterized by a two year study of Latin literature. For those majoring in Classics two years of the study of Greek are also required. The student pursuing this course may major in the fields of Classics, English, History, Education, Philosophy, Political Science, Economics, Psychology or Sociology.

BACHELOR OF SCIENCE DEGREE

The courses which lead to the degree of Bachelor of Science fall into three general groups. The pure science courses are designed for students who wish to major in the fields of Biology, Chemistry, Physics, Electronics or Mathematics or who wish to fulfill the requirements for entrance into medical or dental school. The second group of courses enables the student, lacking in prerequisites for the Arts course, to major in the fields of Education, English, Psychology, History, Economics, Philosophy, Political Science or Sociology.

The third group of courses leads to the degree of Bachelor of Science in Business Administration with a major in Accounting or General Business. In all these courses certain general cultural subjects such as English and Philosophy are prescribed.

These fields of study afford a student who has not completed the prerequisites for the A.B. course in high school an opportunity

to pursue a course of study which will fit him for graduate work in law, education, business or government.

DEGREE REQUIREMENTS

To receive the Bachelor's degree a student is required to complete successfully all prescribed courses in the curriculum for which he has registered. In addition to the credit requirement each candidate for a degree must maintain a quality point average of 1.00 to qualify for the bachelor's degree. A credit of semester hour represents one hour a week for one semester except when a class period is conducted in the style of a conference or seminar, in which case fewer credits are granted. Two or more hours of laboratory work are counted as the equivalent of one lecture period.

PRESCRIBED COURSES

Certain courses are prescribed for all the curricula leading to the bachelor's degree. These include required courses in English, Mathematics and the sequence of Philosophy courses comprising Logic, Epistemology, Cosmology, Metaphysics, Ethics, Psychology and Natural Theology. Each student must also complete a year of advanced language, continuing the modern language which he started in high school. In cases where a student is permitted to take an elementary language course, he will be required to take the advanced course in his Sophomore year. Moreover in all the curricula at least one year of U. S. History and, excepting Business Administration, courses in the physical and biological sciences are required. In addition in each of the various curricula certain courses are prescribed as necessary for the minimum requirement for the particular degree awarded upon successful completion of the curriculum. These prescribed courses are outlined in detail in the summaries contained in the following pages. Catholic students are also required to pursue a prescribed course in Theology in each of the four years; non-Catholic students must take an equivalent number of elective credits to substitute for the credits in Theology.

MAJOR FIELDS OF STUDY

Before the close of his sophomore year each student with the assistance of his faculty adviser and the approval of the Dean

must determine his major elective for the ensuing two years. The field of concentration for students who wish to major in science or to prepare for medical school is normally determined by the course they choose upon entering Freshman year.

In determining the major elective the decisive factor is not the student's desires, but his prospective vocation in life. Consequently what is elective with the student is not so much his studies, especially in details, but rather the career which he wishes to follow. In all cases it is clearly understood that, no matter what a student's major may be, he is still obliged to follow the prescribed courses of Philosophy in Junior and Senior years.

To major a student must present a minimum of six upper division courses (18 to 24 semester hours in the same field).

The major fields of study are:

Accounting	History
Biology	Mathematics
Business Administration	Philosophy
Chemistry	Physics and Electronics
Classical Languages	Political Science
Economics	Psychology
Education	Sociology
English	

RECOMMENDATION

No recommendation for graduate studies or professional schools will be given to any student who does not maintain a 1.5 quality point average in his major field.

GRADUATION HONORS

The degree of Bachelor of Arts or of Bachelor of Science shall be conferred with distinction under the following rules: Students who have completed a minimum of one hundred hours in the University of Scranton are eligible for general honors. Those who earn an average of two quality points a semester hour are recommended for a degree cum laude. Those who earn an average of at least two and one-half quality points a semester hour are recommended for a degree magna cum laude. Those who earn an average of three quality points a semester hour are recommended for a degree summa cum laude.

PRE-LEGAL STUDIES

Applicants interested in the study of law may enroll in any of the following courses:

1. Bachelor of Arts—Major: Classics
2. Bachelor of Science—Major: Political Sciences
3. Bachelor of Science—Major: History
4. Bachelor of Science—Major: Economics
5. Bachelor of Science—Major: Sociology
6. Bachelor of Science—Major: English
7. Bachelor of Science—Major: Business

A major in any of the curricula listed above satisfies the requirements of the Pennsylvania State Board of Law Examiners and meets the admission requirements of all accredited law schools. The prospective lawyer is urged to enroll for the Bachelor of Arts if he has three units of high school Latin. If the applicant has not completed three years of Latin he may enroll for any of the other majors indicated.

Graduate Degrees

The Graduate Session of the University of Scranton accepts applicants for the degrees of Master of Arts and Master of Science in Education and the Master of Arts in History and Government. Men and women applicants may register in September, February or at the beginning of the summer session. The Graduate Session in education makes provision for course concentrations in educational psychology and guidance, in secondary education and in a correlated subject matter-professional program. A program of courses may be planned in such a way as to provide for an approach that is philosophical, historical, professional or a combination of any of these. Students interested in the educational psychology major may work toward the Pennsylvania Guidance Counselor's Certificate or the Psychological Examiner's Certificate, or choose courses consistent with professional growth. For example, nurses or elementary school teachers may find it worth while to emphasize educational psychology. The secondary education concentration is a flexible major whereby the teacher or person interested in education may gain professional competence and select courses that contribute to general and cultural knowledge. A program favorable to secondary school teachers of social studies offers courses in American history and political science together with certain professional courses to implement instruction in these academic fields.

The Master of Arts in History and Government offers courses in the field of American History and Government to those men and women interested in advancing themselves in these fields.

AIMS

The Graduate Session of the University of Scranton is dedicated to the task of communicating and interpreting professional and academic knowledge and relationships, to assist in developing skills of teachers and others interested in increasing competence in their chosen field. Consistent with the ideals of a liberal arts college, the Graduate Session also seeks to communicate to its students, philosophical and historical data that will be of a liberal and general education value. Research to the extent practicable with facilities and faculty is encouraged. As a Graduate Session

under Catholic auspices it fosters those value judgments so basic to education, which are not only founded upon a given discipline, but come from Christian revelation and scholastic philosophical sources.

ORGANIZATION AND LOCATION

The administration and supervision of the Graduate Session is the responsibility of the Dean of Graduate Studies. He is assisted by a Graduate Advisory Committee, of which he is chairman. The other members of this committee are the Registrar of the University, the Chairman, Department of Education and Psychology, and the students' major professors in this Department. Graduate courses are part of the curricula of the Department of Education and Psychology and the Department of History. All questions concerning admission, failure of candidacy and comprehensive examinations or modifications of course programs, will be submitted in writing to the Dean of Graduate Studies. Decisions of the Dean of Graduate Studies and his Advisory Committee are final.

Requests for transcripts, letters to draft boards and data concerning academic records will be made to the Registrar, University of Scranton.

The office of the Dean of Graduate Studies and the office of the Registrar are located upon the first floor, Main Building, Wyoming Avenue, and are open from 9:00 A.M. to 5:00 P.M. daily and from 9:00 A.M. to 12:00 noon on Saturdays. The office of the Registrar is also open from 7:00 to 9:00 P.M. each evening except Saturday.

Graduate courses are taught each evening, except Saturday, in the Main Building, Wyoming Avenue, from 7:00 to 10:00 P.M. and on Saturdays from 9:00 A.M. to 1:00 P.M. Each year there is also a summer session of eight weeks with classes held in the evenings and on Saturday mornings.

Offices of the graduate professors are located in the Department of Education and Psychology on the second floor, Main Building, Wyoming Avenue. Conferences are arranged by appointment and during hours noted on schedules in the Department office.

EXPENSES
GRADUATE SESSIONS

Tuition per semester hour credit	$18.00
Registration fee per semester	5.00
Examination material per semester	1.00
Deferred payment fee	5.00
Late registration fee	5.00
Library fee per semester	5.00
Graduation fee	30.00
Audio-Visual Aids fee per semester	5.00
Binding of Thesis	10.00
Estimated cost of books, supplies, equipment per year	40.00 to 90.00

REFUNDS

In the event a student discontinues training the following schedule of pro rata charges for tuition and fees will be made:

	Percentages to be Charged	
Period of Attendance	16-19 wks.	6-8 wks. inc.
One week or less	20%	40%
Between one and two weeks	20	80
Between two and three weeks	40	100
Between three and four weeks	60	100
Between four and five weeks	80	100
Over five weeks	100	100

In order to obtain a refund, notice of withdrawal must be reported in writing to the Treasurer.

APPLICATIONS

Anyone who plans to enter the Graduate Session should apply to the Registrar's Office for an application blank. Completed applications, together with transcripts of undergraduate or graduate work taken elsewhere, should be in the Office of the Registrar one month before the beginning of the session which the applicant intends to enter. No student will be permitted to register for courses until his credentials have been received by the Registrar. Students are not formally admitted to graduate instruction until they have been officially notified.

Students who intend to transfer credits elsewhere, or who are not matriculating for the advanced degree, will complete the same admission requirements as degree students.

The applicant for admission must possess the baccalaureate degree and provide the Graduate Advisory Committee with evidence of sufficient undergraduate preparation of good quality in Education. The student must have completed the ordinary state requirements for certification as a secondary school teacher with an honor point average in Education courses equal to or better than his general average. If undergraduate preparation in Education is deficient in amount of course credit, the student may be allowed to correct this deficiency with the approval of the Graduate Advisory Committee while he is taking his initial graduate courses, but before application to candidacy for the advanced degree. In certain cases, however, where the number of Education course credits is deficient, but the student seems to have acquired the basic essential professional knowledge, he may request the Graduate Advisory Committee for permission to take the initial examination for degree candidacy. This permission will be given only once. Successful performance on this examination will meet one of the requirements for Admission to candidacy for the degree.

TRANSFER STUDENTS

Approved graduate work done in residence at other institutions after the student has acquired candidacy status may be offered in partial fulfillment of course reqiurements for the graduate degree at the University of Scranton. An official transcript of semester hours earned elsewhere will be submitted to the Office of the Registrar. Not more than six credits will be accepted. Marks in these courses must be B or better. These six credits may not be taken more than six years before the student begins his graduate studies at the University of Scranton.

CANDIDACY FOR ADVANCED DEGREES IN EDUCATION

The student is considered an unclassified graduate student until he fulfills the following requirements:

1. Files a formal application for degree candidacy with the Registrar.

2. Completes successfully at least six semester hours of course credit at the University of Scranton. Normally these course credits will be Education 202, 203 and 204.

3. Passes successfully the initial or candidacy examination.

The candidacy examination provides the Graduate Advisory Committee with some assurance that certain basic professional knowledge is possessed by the candidate before registration for more courses. If a deficiency exists in required professional knowledge, the Graduate Advisory Committee may prescribe further study before admission to candidacy.

MENTORS

At the time the student seeks candidacy for the advanced degree, a mentor will be appointed to formulate a program of studies and supervise his work. This mentor will be a member of the Department of Education and Psychology, whose academic interest coincides with that of the student. Since conferences involving projects, techniques and research findings are invaluable in promoting academic growth, the arrangement of such conferences with his mentor as frequently as necessary is the responsibility of the graduate student. Conference hours for each professor are posted in the Department of Education and Psychology office.

COURSES

Courses in the Graduate Session are numbered in two ways: 150 series and 200 series. Courses on the 150 level are graduate-undergraduate courses. They are open to certain senior undergraduate students of excellent attainment who are in the last semester of their course of study. Undergraduate students are not admitted to courses on the 200 level.

At least two-thirds of the student's total semester hours must be in courses of the 200 series.

COURSE REQUIREMENTS—EDUCATION DEGREES

All students who intend to work for a graduate degree must take Education 202, 203 and 204. Normally, these courses will be completed before the applicant applies for candidacy for the advanced degree.

All degree candidates must present evidence of a sound knowledge of scholastic philosophy. Students deficient in this requirement must complete courses: Education 200 and 201. These courses provide a basic understanding of scholastic philosophy necessary for success in the graduate program. The four semester hours of credit earned upon successful completion of these courses are an integral part of the thirty semester hours of credit required for the advanced degrees.

THE MASTER OF ARTS IN EDUCATION DEGREE

Thirty semester hours of course credit are needed for the M.A. degree. Six of the total number of semester hours will be in Education 202, 203 and 204. Of the remaining twenty-four semester hours, six semester hours of credit are allowed for the successful completion of a thesis, a requirement of the Master of Arts degree. Students who find it necessary to take Education 200 and 201 (scholastic philosophy) will complete a program of fourteen semester hours of additional course credit together with the appropriate thesis. Work for the degree may be done in any one of the three course concentrations.

The candidate's mentor, at the time of candidacy for the degree, in co-operation with the student will plan a program of studies which will, in conjunction with the thesis, provide a sound treatment of some area of interest to the student. It is expected that the graduate student will work intensively with his mentor upon a problem in this area, and that the results of his study will be of sound scholarship and technical accuracy. The M.A. program will call for certain flexible concentration requirements as prescribed by the mentor. Such requirements may include certain essential courses consistent with sound scholarship. The judgment of the mentor is final in this matter.

A thesis is required for the M.A. degree. This thesis may be a research paper of suitable dimensions, a critical report of certain procedures or sectors of knowledge, or a learned biographical work on the Master's level.

The student will register for a seminar while working on his thesis and will continue to schedule seminars until completion of the research paper. Registration for the seminar will be with the permission of the student's mentor.

Each thesis will be done under the active supervision of the candidate's mentor, and must be approved by one additional reader. In cases of doubt, a third reader may be required. In the preparation of the thesis, style regulations prescribed by the Department of Education and Psychology will be observed. Two copies of the bound thesis must be submitted to the Graduate Division of the University of Scranton on or before the date indicated in the University calendar. Theses become the property of the University and permission to publish them in their original or modified form must be secured from the Dean of Graduate Studies.

THE MASTER OF SCIENCE IN EDUCATION DEGREE

Thirty semester hours of course credit are needed for the M.S. degree; six semester hours of which must be in the required courses: Education 202, 203 and 204. Certain students will also find it necessary to complete Education 200 and 201 (scholastic Philosophy). There is no thesis requirement.

At the time of candidacy for the degree the graduate student will meet with his mentor for the selection of a major concentration of courses, and the approval of his program of studies. The student may work for the Master of Science degree in any one of the three majors indicated below. In the event the candidate selects the correlated program, one-half of the candidate's program of studies will be in secondary education and the remainder in American history and political science.

While the condidate's program of courses within the major concentration will possess maximum flexibility, certain essential courses may be required. The mentor may make certain substitutions in order to round out a sound program of courses. His judgment in this matter is final.

MAJOR COURSE CONCENTRATIONS IN EDUCATION

A. *Secondary Education*

Education 153	Mental Hygiene	2 sem. hrs.
Education 155	Introduction to Guidance	3 sem. hrs.
Education 158	Audio-Visual Techniques in Education	3 sem. hrs.

Education 159	Contemporary Schools of Psychology	2 sem. hrs.
Education 205	Comparative Education	2 sem. hrs.
Education 206	History of Secondary Education in U. S.	2 sem. hrs.
Education 207	History of Problems in Education	2 sem. hrs.
Education 208	Educational Tests and Measurement	2 sem. hrs.
*Education 209	Modern Trends in Teaching	2 sem. hrs.
*Education 210	Secondary School Curriculum	2 sem. hrs.
Education 211	Problems in Secondary Education	2 sem. hrs.
Education 213	Student Activities	2 sem. hrs.
*Education 214	Educational Psychology, Advanced	2 sem. hrs.
Education 216	Adolescent Development	2 sem. hrs.
Education 250	Ethics and Modern Social Problems	2 sem. hrs.
Education 251	Teaching of History and Social Studies	2 sem. hrs.
Education 260	Secondary School Management	2 sem. hrs.
Education 271	Measures of Attainment	2 sem. hrs.

*Education 209, 210 and 214 are required of students majoring in secondary education.

B. *Secondary Education—Correlated Curriculum*

(1) As indicated above.

Education 209, 210 and 251 are required of students majoring in secondary education—correlated curriculum.

(2) Courses as on Page 118—History.

C. *Guidance and Educational Psychology*

(Letters denote sequence in which courses should be taken.)

I. Introductory (philosophy, principles and practices of guidance).

*Ed. 155 Introduction to Guidance ..... 3 sem. hrs.

II. Statistics (the interpretation of numerical data concerning humans).

*(a) Ed. 151 Educational Statistics I .....2 sem hrs.
(b) Ed. 152 Educational Statistics II .....2 sem. hrs.

III. Testing (identification, measurement and recording of significant human characteristics).

*(a) Ed. 208 Educational Measurement....2 sem. hrs.
(b) Ed. 271 Measures of Attainment.....2 sem. hrs.
(c) Ed. 272 Personality Measurement.....2 sem. hrs.
(d) Ed. 217 Special Abilities Testing.....2 sem. hrs.
(e) Ed. 274 a, b Psychological Testing .....3-6 sem. hrs.

IV. Counseling Information (collection, evaluation and organization of all types of educational, community and occupational information).

*(a) Ed. 156 Research in Occupational Information .....3 sem. hrs.
(b) Econ. 150 Labor Problems .....3 sem. hrs.

V. Individual Differences (an understanding of the individual and his problems of behavior, learning and adjustment).

*(a) Ed. 270 Advanced General Psychology .....2 sem. hrs.
(b) Ed. 214 Educational Psychology, Advanced .....2 sem. hrs.
(c) Ed. 215 Child Development .....2 sem. hrs.
(d) Ed. 216 Adolescent Development .....2 sem. hrs.
(e) Ed. 153 Mental Hygiene .....2 sem. hrs.
(f) Ed. 154 Abnormal Psychology .....2 sem. hrs.
(g) Ed. 159 Contemporary Schools of Psychology .....2 sem. hrs.

VI. Counseling Techniques (counseling and guiding students who need special help).

*(b) Ed. 218 Counseling Methods .....2 sem. hrs.

(c) Ed. 275 Supervised Counseling Practicum .....2 sem. hrs.

VII. Program Administration (organization, administration and evaluation of guidance programs and services).

(a) Ed. 219 Development of School Guidance Programs .....2 sem. hrs.

(b) Ed. 213 Student Activities .....2 sem. hrs.

*Education 151, 208, 270 are required of students taking work in educational psychology. Education 151, 155, 156, 208, 213 or 219, 217, 218, 271 or 272 and 275 are required of graduate students in guidance.

MASTER OF ARTS IN HISTORY AND GOVERNMENT

General Information

The University of Scranton, Graduate Division, offers courses leading to the Master of Arts in History and Government. The major sequence shall consist of twenty-four credits in the field of History and Government, including one two credit course in Science and Method of Research. One seminar for which no credit is allowed must be completed by all candidates. All candidates who have not had scholastic philosophy on the undergraduate level will be required to complete four semester hours in scholastic philosophy.

Each candidate will be required to complete a major of sixteen hours and a minor of eight semester hours. The credits in scholastic philosophy will count toward the minor. All candidates must write a thesis as partial fulfillment of the requirement for the Master of Arts degree. The topic of the thesis must be approved by a mentor before beginning work on the thesis.

Early in the final semester all candidates must take a Comprehensive Examination covering the entire field of the major concentration.

The applicant for admission to graduate courses in history must, at the time of application, present an official transcript of undergraduate courses and a certification that the applicant has been granted a baccalaureate degree from an accredited college or university.

All candidates for the M.A. in History must have completed on the undergraduate level a minimum of eighteen semester hours in History, Government, Political Science, and/or allied courses. Candidates must have a Quality Point Index of not less than 1.5 in their required prerequisite undergraduate courses in order to qualify for acceptance.

The candidate for the M.A. in History will not be considered matriculated until the successful completion of six graduate credits in History and must successfully pass a candidacy examination. This examination shall include all matter completed in the required undergraduate prerequisite courses, as well as in the course work completed to date on the graduate level.

REGISTRATION

At the time the student becomes a candidate for the advanced degree, he will obtain a program of courses in his major concentration approved by his mentor. This approved program must be secured before registration and presented to the Registrar at the time of registration. Non-classified students, i.e., those not working for the advanced degree or enrolling in their initial required courses may register without the approved program.

GRADES

Achievement in courses numbered 200 and above will be marked as H, P or F (failure). P denotes passing and H excellence. The mark H is awarded only to a small number of students whose work is of outstanding quality. Courses on the 150 level will be graded A, B, C and F (failure). A mark of A denotes exceptional performance and is restricted to students whose work is outstanding. A mark of B is required of graduate students for passing courses in the 150 series. A mark of C denotes passing only for undergraduate credit.

Students who fail four courses or a total of eight semester hours of credit at any time while a resident student will be automatically dismissed. Notification of this action will be sent to the student by mail.

Work in any graduate course that has been marked incomplete (Inc.) must be made up at a date no later than the conclusion of the first semester subsequent to the one in which the student was enrolled for the course. Negligence in completing the unfinished course work will result in the automatic conversion of the incomplete (Inc.) to failure (F).

COMPREHENSIVE EXAMINATIONS

Before any Master's degree is awarded, the candidate must pass a comprehensive examination in his graduate course work. This examination may be either oral, written or both. Eligibility for admission to the examination is determined by the student's mentor with the approval of the Graduate Advisory Committee; permission will be issued when it is ascertained that the student has satisfied all requirements. This examination will be given only on the date published by the Graduate Department.

In advance of the date announced for the examination, the candidate should consult his mentor for a general explanation of the topics to be covered in the examination.

A candidate who fails the comprehensive examination for the second time will no longer be considered as a candidate for the advanced degree.

The results of the comprehensive examination will be forwarded to the candidate by mail.

RESIDENCE

All graduate courses are given in residence. One full year of residence is required for the M.A. and the M.S. degrees. Candidates who are not full time students will require more than one year to complete their course work. All graduate work including the thesis must be completed within six consecutive years. Time spent in the armed forces is not included in the six year period.

SCHOLARSHIPS

There are a limited number of scholarships available for graduate students, providing for full remission of tuition and fees.

The scholarship holder will engage in departmental duties or research. Applications for graduate scholarships may be obtained from the Registrar, University of Scranton.

GUIDANCE AND PLACEMENT

The University maintains both guidance and placement services available to graduate students. The Guidance Department, located on the second floor of the Business Building on Linden Street, offers professional counseling service on problems of a vocational and educational nature.

The University Placement Office is located at 9 Platt Place, Scranton, Pa., and is open daily from 9:00 A.M. to 5:00 P.M. and Saturdays from 9:00 A.M. until noon.

SUMMARY

The following are procedures to be followed by the student working for the advanced degree:

1) File an application for admission to graduate study together with official transcripts of undergraduate preparation and an official transcript of graduate credits taken elsewhere. The student will be formally notified of his acceptance or rejection for graduate instruction.

2) Apply for candidacy for the degree by fulfilling requirements given on page 39. Formal notification of his acceptance as a degree candidate will be mailed to the student.

3) Meet with his mentor to organize a program of studies in the major course concentration selected.

4) Present the program of studies, approved by his mentor, to the Registrar during *each registration period.*

5) All candidates should have completed general course requirements as given on page 40 at the time of selecting a major.

6) The candidate for the M.A. degree must complete the required thesis (cf. p. 41).

7) Successfully pass the required comprehensive examination.

8) Make formal application to the Registrar for the degree.

Evening Sessions

The Evening Sessions of the University of Scranton provide a program of studies leading to a Bachelor of Science degree after working hours. The emphasis is on liberal education, whose curriculum comprises a liberal training in language, literature, religion and philosophy; secondarily this program presents a solid training in one of several fields of vocational or professional competence.

The Evening Sessions also afford an opportunity to pursue selected courses in a field of choice without the objective of a degree. The program provides for cultural development, job advancement, the increase of special skills and for the satisfaction of requirements for particular jobs.

Evening session courses are open to both men and women. They are conducted from 6:30 to 10:20 P.M. on Monday, Tuesday, Wednesday and Thursday. Courses are taught by members of the University faculty supplemented by members of the faculties of other educational institutions and by qualified persons drawn from business and industry. The quality of instruction is the same as that offered in the day sessions.

PROGRAMS

Students desiring to matriculate for the Bachelor of Science degree must satisfy the entrance requirements of the University and those provisions which are set forth in the General Catalog of the University.

The Evening Sessions conduct a three-year Associate Diploma program to provide training in marketing, accounting, management and industrial relations. Students desiring to enter upon such a program must be graduates of an accredited high school. Students who complete an Associate Program may matriculate for a degree if their work during the three years meets with the approval of the Committee on Standards.

Students who desire to take courses without the objective of a Degree or Associate Diploma may do so. To receive college credit for their work, such students must submit an application for admission together with an official record of their high school work.

Students may also be admitted as auditors or non-credit students. Auditors are not obliged to undergo term examinations or to participate in class recitations or other class work unless they desire to do so. No grades are given for their work. Fees for such students will be the same as for those seeking college credit.

SUMMER SESSION

The Summer Session courses will run for eight weeks; the lecture and laboratory work will be so arranged that credit for one semester's work may be given in the courses taken. Students, at the discretion of the Dean, may be permitted to pursue courses in the Summer Session for the purpose of obtaining advanced standing. Students who are delinquent in any course are required to attend the summer sessions to make up their deficiencies.

EVENING AND SUMMER SESSIONS

Tuition, per semester hour of credit	$ 15.00
Ordinary Fees:	
Registration, per course (Maximum $3.00)	1.00
Examination and mimeograph materials	1.00
*Student Activity fee per semester	2.00
Special Service Fees:	
Late registration	3.00
Deferred payment	3.00
Transcript of record	1.00
Condition Examination	5.00
Change of Course or Schedule	1.00
Fees Attached to Particular Courses:	
Science laboratory, each course per semester	15.00
Engineering Laboratory	10.00
Business Laboratory	5.00
Audio-Visual Technique	2.50
Breakage	actual
Fees Attached to Special Examinations:	
Graduate Record Examination	7.50
American Institute of Accountants	5.00
Fees Chargeable on Application for Degree:	
Yearbook fee	10.00

Graduation fee	30.00
Retreat fee (optional)	15.00

*This fee covers the cost of publication of the Evening Session paper and the operation of the activities sponsored by the Evening Session Student Council. It is intended to be devoted to the encouragement of activities for the Evening Session students.

ASSOCIATE DIPLOMA CURRICULA

To provide students in the Evening Sessions with an objective that would satisfy vocational aspirations and at the same time give a solid foundation for further work leading to a degree, the University has instituted a series of Associate Curricula. These curricula will provide training in the fields of Accounting, Marketing, Management, and Industrial Relations. The technical training in these fields will be balanced by a program in the liberal arts. Each of these Associate Curricula can be completed in a three-year period of time by attendance at the Evening Sessions.

The entrance requirements for the Associate Curricula are not as stringent as those for the bachelor of science degree. No entrance examinations are required, but the student must be a graduate of an accredited high school and must have completed the same number of units of work in high school as are required for the degree work at the University.

Students who begin the Associate Program may later transfer to a bachelor of science program provided they have completed at least 60 hours of college work and this work is accepted by the Committee on Standards as satisfactory.

Associate Diploma Curricula
MARKETING

SUBJECTS		SUBJECTS	
Fall Semester		**Spring Semester**	
1) English 1	3	2) English 2	3
History 1	3	History 2	3
Business 3-4	4	Business 107	4
3) Theology 1-2 or 21-22	4	4) Theology 101-102 or 110-111	4
Business 140	4	Business 141	4
Economics 23	3	Economics 24	3
5) Business 143	4	6) Business 146	4
Business 5-6	4	Economics 25-26	4
Philosophy 110	4	Philosophy 111	4

ACCOUNTING

1)	English 1	3	2)	English 2	3
	History 1	3		History 2	3
	Business 1	4		Business 2	4
3)	Theology 1-2 or 21-22	4	4)	Theology 101-102 or 110-111	4
	Business 3-4	4		Business 21-22	4
	Economics 23	3		Economics 24	3
5)	Business 101	4	6)	Business 102	4
	Business 5-6	4		Business 25-26	4
	Philosophy 110	4		Philosophy 111	4

MANAGEMENT

1)	English 1	3	2)	English 2	4
	History 1	3		History 2	3
	Business 3-4	4		Business 1	4
3)	Theology 1-2 or 21-22	4	4)	Theology 101-102 or	
	Business 108	4		Business 152	4
	Economics 23	3		Economics 24	3
5)	Business 153	4	6)	Business 102	4
	Business 5-6	4		Business 155	4
	Philosophy 110	4		Philosophy 111	4

INDUSTRIAL RELATIONS

1)	English 1	3	2)	English 2	3
	History 1	3		History 2	3
	Economics 23	3		Economics 24	3
				English 16	2
3)	Economics 150	3	4)	Economics 25-26	4
	Sociology 21	3		Sociology 22	3
	Theology 1-2 or 21-22	4		Theology 101-102 or 110-111	4
5)	Economics 102	3	6)	Economics 104	3
	Economics 105	3		Economics 106	3
	Philosophy 110	4		Philosophy 111	4

INSTITUTE OF INDUSTRIAL RELATIONS

The Institute of Industrial Relations is an autonomous integral part of the University. The history and general aims of the Institute are set forth under General Information.

The classes of the Institute are open to men and women interested in the intricate and specialized field of Industrial Relations. No academic credits are awarded for the courses pursued in the Institute but students who complete a required number of Institute courses are awarded a Certificate of Achievement in Industrial Relations.

Among the courses offered by the Institute are the following:

Basic Economics
Industrial Ethics
Labor Law
Political Parties and Pressure Groups
Parliamentary Procedure
Grievance Procedure
Basic Sociology (The Nature of Society)
Employee Welfare Plans
Causes of Industrial Peace
The Labor Contract
Industrial Psychology
Wages, Prices, Profits
Economic Problems of the Anthracite Region
Collective Bargaining
History and Philosophy of Organized Labor
Effective Writing
Fundamentals of Public Speaking
Argumentation and Debate
International Aspects of Industrial and Labor Relations
Communism, Facism and Democracy
The National Income and Its Distribution
Understanding the American Constitution
The Federal System of Government in the United States
Principles and Practice of Arbitration
Mediation and Conciliation
Statistics and Statistical Methods in Industrial Relations
Speech Analysis

Information regarding the semesters, classes and requirements of the Institute may be had by addressing the Director of the Institute.

CURRICULUM TABLES

BACHELOR OF ARTS

Major in Classics

Students pursuing the Bachelor of Arts Course may also major in Education, English, History or Social Science.

FRESHMAN I

	Credits
English 1, 3	4
Latin 1, 3 or 31	4
Mathematics 7 or Greek 1 or 21	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	18

FRESHMAN II

	Credits
English 2, 4	4
Latin 2, 4 or 32	4
Mathematics 8 or Greek 2 or 22	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	18

SOPHOMORE I

English 23	3
Latin 3 or 23	4
Greek 3 or 21 or Biology 3	3
History 1	3
Theology 21	2
Military Science 3	2
	17

SOPHOMORE II

English 24	3
Latin 4 or 24	4
Greek 4 or 22 or Biology 4	3
History 2	3
Theology 22	2
Military Science 4	2
	17

JUNIOR I

Philosophy 101-102	5
Physics 3	3
Theology 101	2
Electives (Classics)	6
	16

JUNIOR II

Philosophy 103-104	5
Chemistry 4	3
Theology 102	2
Electives (Classics)	6
	16

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Electives (Classics)	6
	16

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Electives (Classics)	6
	16

Total: 134 credits

BACHELOR OF SCIENCE

Major in English

Freshman I

	Credits
English 1, 3	4
Biology 3	3
Mathematics 7	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	17

Freshman II

	Credits
English 2, 4	4
Biology 4	3
Mathematics 8	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	17

Sophomore I

English 23	3
History 1	3
Economics 23	3
Sociology 21	3
Theology 21	2
Military Science 3	2
	16

Sophomore II

English 24	3
History 2	3
Economics 24	3
Sociology 22	3
Theology 22	2
Military Science 4	2
	16

Junior I

Philosophy 101-102	5
History 3	3
Physics 3	3
Theology 101	2
Electives (English)	6
	19

Junior II

Philosophy 103-104	5
History 4	3
Chemistry 4	3
Theology 102	2
Electives (English)	6
	19

Senior I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Electives (English)	6
	16

Senior II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Electives (English)	6
	16

Total: 136 credits

BACHELOR OF SCIENCE

Major in Economics

FRESHMAN I

	Credits
English 1, 3	4
Biology 3	3
Mathematics 7	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	17

FRESHMAN II

	Credits
English 2, 4	4
Biology 4	3
Mathematics 8	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	17

SOPHOMORE I

English 23	3
History 1	3
Economics 23	3
Sociology 21	3
Theology 21	2
Military Science 3	2
	16

SOPHOMORE II

English 24	3
History 2	3
Economics 24	3
Sociology 22	3
Theology 22	2
Military Science 4	2
	16

JUNIOR I

Philosophy 101-102	5
Physics 3	3
Theology 101	2
Economics 25	2
Economics 103	3
Business 105	3
	18

JUNIOR II

Philosophy 103-104	5
Chemistry 4	3
Theology 102	2
Economics 26	2
Economics 105	3
Business 106	3
	18

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Economics 102	3
Economics 105	3
Business 103	3
	19

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Economics 150	3
Economics 106	3
Business 104	3
	19

Total: 140 credits

BACHELOR OF SCIENCE

Major in History

Freshman I

	Credits
English 1, 3	4
Biology 3	3
Mathematics 7	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	17

Freshman II

	Credits
English 2, 4	4
Biology 4	3
Mathematics 8	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	17

Sophomore I

English 23	3
History 1	3
Economics 23	3
Sociology 21	3
Theology 21	2
Military Science 3	2
	16

Sophomore II

English 24	3
History 2	3
Economics 24	3
Sociology 22	3
Theology 22	2
Military Science 4	2
	16

Junior I

Philosophy 101-102	5
History 3	3
Physics 3	3
Theology 101	2
Electives (History)	6
	19

Junior II

Philosophy 103-104	5
History 4	3
Chemistry 4	3
Theology 102	2
Electives (History)	6
	19

Senior I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Electives (History)	6
	16

Senior II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Electives (History)	6
	16

Total: 136 credits

BACHELOR OF SCIENCE

Major in Political Science

FRESHMAN I

	Credits
English 1, 3	4
Biology 3	3
Mathematics 7	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	17

FRESHMAN II

	Credits
English 2, 4	4
Biology 4	3
Mathematics 8	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	17

SOPHOMORE I

English 23	3
History 1	3
Economics 23	3
Sociology 21	3
Theology 21	2
Military Science 3	2
	16

SOPHOMORE II

English 24	3
History 2	3
Economics 24	3
Sociology 22	3
Theology 22	2
Military Science 4	2
	16

JUNIOR I

Philosophy 101-102	5
History 3	3
Physics 3	3
Theology 101	2
Electives (Political Science)	6
	19

JUNIOR II

Philosophy 103-104	5
History 4	3
Chemistry 4	3
Theology 102	2
Electives (Political Science)	6
	19

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Electives (Political Science)	6
	16

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Electives (Political Science)	6
	16

Total: 136 credits

BACHELOR OF SCIENCE

Major in Sociology

Freshman I

	Credits
English, 1, 3	4
Biology 3	3
Mathematics 7	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	17

Freshman II

	Credits
English 2, 4	4
Biology 4	3
Mathematics 8	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	17

Sophomore I

English 23	3
History 1	3
Economics 23	3
Sociology 21	3
Theology 21	2
Military Science 3	2
	16

Sophomore II

English 24	3
History 2	3
Economics 24	3
Sociology 22	3
Theology 22	2
Military Science 4	2
	16

Junior I

Philosophy 101-102	5
History 3	3
Physics 3	3
Theology 101	2
Electives (Sociology)	6
	19

Junior II

Philosophy 103-104	5
History 4	3
Chemistry 4	3
Theology 102	2
Electives (Sociology)	6
	19

Senior I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Electives (Sociology)	6
	16

Senior II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Electives (Sociology)	6
	16

Total: 136 credits

BACHELOR OF SCIENCE

Major in Education

FRESHMAN I

	Credits
English 1, 3	4
Biology 3	3
Mathematics 7	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	17

FRESHMAN II

	Credits
English 2, 4	4
Biology 4	3
Mathematics 8	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	17

SOPHOMORE I

English 23	3
History 1	3
Sociology 21	3
Theology 21	2
Military Science 3	2
Elective	3
	16

SOPHOMORE II

English 24	3
History 2	3
Sociology 22	3
Theology 22	2
Military Science 4	2
Elective	3
	16

JUNIOR I

Philosophy 101-102	5
Education 103	3
Theology 101	2
Electives	6
Physics 3	3
	19

JUNIOR II

Philosophy 103-104	5
Education 111	3
Theology 102	2
Electives	6
Chemistry 4	3
	19

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Education 105	3
Education 101	3
Electives	3
	19

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Education 107	6
Electives	3
	19

Total: 142 credits

BACHELOR OF SCIENCE

Major in Psychology

FRESHMAN I

	Credits
English 1, 3	4
Biology 3	3
Mathematics 7	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	17

FRESHMAN II

	Credits
English 2, 4	4
Biology 4	3
Mathematics 8	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	17

SOPHOMORE I

English 23	3
History 1	3
Economics 23	3
Sociology 21	3
Theology 21	2
Military Science 3	2
	16

SOPHOMORE II

English 24	3
Economics 24	3
History 2	3
Sociology 22	3
Theology 22	2
Military Science 4	2
	16

JUNIOR I

Philosophy 101-102	5
Physics 3	3
Theology 101	2
Psychology 120	3
Psychology 122	3
Elective	3
	19

JUNIOR II

Philosophy 103-104	5
Chemistry 4	3
Theology 102	2
Psychology 121	3
Education 111	3
Education 151	3
	19

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Education 106	3
Psychology 153	3
	16

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Psychology 123	3
Psychology 154	3
	16

Total: 136 credits

BACHELOR OF SCIENCE

MAJOR: BIOLOGY

Pre-Medical and Pre-Dental Course

FRESHMAN I

	Credits
Biology 1	4
English 1, 3	4
Mathematics 11	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	18

FRESHMAN II

	Credits
Biology 2	4
English 2, 4	4
Mathematics 12	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	18

SOPHOMORE I

Chemistry 1	4
English 23	3
Biology 21	4
History 1	3
Theology 21	2
Sociology 23	3
Military Science 3	2
	21

SOPHOMORE II

Chemistry 2	4
English 24	3
Biology 22	4
History 2	3
Theology 22	2
Military Science 4	2
	18

JUNIOR I

Philosophy 101-102	5
Physics 1	4
Theology 101	2
Chemistry 101	4
Biology 103	4
	19

JUNIOR II

Philosophy 103-104	5
Physics 2	4
Theology 102	2
Chemistry 102	4
Biology 105	4
	19

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Elective (Biology or Chemistry)	4
Biology 120	4
	18

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Chemistry 22	4
Biology 121	4
	18

Total: 149 credits

BACHELOR OF SCIENCE

Major in Chemistry

FRESHMAN I

	Credits
Chemistry 1	4
English 1, 3	4
Mathematics 13	4
Modern Language 21	3
Theology 1	2
Military Science 1	2
	19

FRESHMAN II

	Credits
Chemistry 2	4
English 2, 4	4
Mathematics 14	4
Modern Language 22	3
Theology 2	2
Military Science 2	2
	19

SOPHOMORE I

Chemistry 21	4
English 23	3
Mathematics 21	4
Physics 1	4
Theology 21	2
Military Science 3	2
	19

SOPHOMORE II

Chemistry 22	4
English 24	3
Mathematics 22	4
Physics 2	4
Theology 22	2
Military Science 4	2
	19

JUNIOR I

Philosophy 101-102	5
History 1	3
Theology 101	2
Chemistry 101	4
Chemistry 123	4
	18

JUNIOR II

Philosophy 103-104	5
History 2	3
Theology 102	2
Chemistry 102	4
Chemistry 124	4
	18

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Chemistry Electives	10
	20

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Chemistry Electives	7
	17

Total: 149 credits

Electives:

Chemistry 103
Chemistry 125
Chemistry 127
Chemistry 129
Chemistry 126
Chemistry 130
Chemistry 132

BACHELOR OF SCIENCE

Major in Mathematics

FRESHMAN I

	Credits
Chemistry 1	4
English 1, 3	4
Mathematics 13	4
Modern Language 21	3
Theology 1	2
Military Science 1	2
	19

FRESHMAN II

	Credits
Chemistry 2	4
English 2, 4	4
Mathematics 14	4
Modern Language 22	3
Theology 2	2
Military Science 2	2
	19

SOPHOMORE I

Physics 11	4
English 23	3
Mathematics 21	4
History 1	3
Theology 21	2
Military Science 3	2
	18

SOPHOMORE II

Physics 12	4
English 24	3
Mathematics 22	4
History 2	3
Theology 22	2
Military Science 4	2
	18

JUNIOR I

Philosophy 101-102	5
Physics 106	4
Theology 101	2
Mathematics 101	4
Mathematics 104 or 109	3
	18

JUNIOR II

Philosophy 103-104	5
Physics 107	4
Theology 102	2
Mathematics 102	3
Mathematics 103 or 108	3
	17

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Mathematics 106	3
Mathematics 104 or 109	3
	16

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Mathematics 107	3
Mathematics 103 or 108	3
	16

Total: 141 credits

BACHELOR OF SCIENCE

Major in Physics

FRESHMAN I

	Credits
Chemistry 1	4
English 1, 3	4
Mathematics 13	4
Modern Language 21	3
Theology 1	2
Military Science 1	2
	19

FRESHMAN II

	Credits
Chemistry 2	4
English 2, 4	4
Mathematics 14	4
Modern Language 22	3
Theology 2	2
Military Science 2	2
	19

SOPHOMORE I

Physics 11	4
English 23	3
Mathematics 21	4
History 1	3
Theology 21	2
Military Science 3	2
	18

SOPHOMORE II

Physics 12	4
English 24	3
Mathematics 22	4
History 2	3
Theology 22	2
Military Science 4	2
	18

JUNIOR I

Philosophy 101-102	5
Mathematics 101	4
Theology 101	2
Physics 103	4
Physics 104	4
	19

JUNIOR II

Philosophy 103-104	5
Mathematics 102	3
Theology 102	2
Physics 102	3
Physics 105	4
	17

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Physics 110	3
Physics 114	1
Mathematics 106	3
	17

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Physics 111	3
Physics 115 or 120	1
Mathematics 107	3
	17

Total: 144 credits

BACHELOR OF SCIENCE

Major in Electronics

FRESHMAN I

	Credits
Chemistry 1	4
English 1, 3	4
Mathematics 13	4
Modern Language 21	3
Theology 1	2
Military Science 1	2
	19

FRESHMAN II

	Credits
Chemistry 2	4
English 2, 4	4
Mathematics 14	4
Modern Language 22	3
Theology 2	2
Military Science 2	2
	19

SOPHOMORE I

Physics 11	4
English 23	3
Mathematics 21	4
History 1	3
Theology 21	2
Military Science 3	2
	18

SOPHOMORE II

Physics 12	4
English 24	3
Mathematics 22	4
History 2	3
Theology 22	2
Military Science 4	2
	18

JUNIOR I

Philosophy 101-102	5
Mathematics 101	4
Theology 101	2
Physics 103	4
Physics 106	4
	19

JUNIOR II

Philosophy 103-104	5
Mathematics 110	3
Theology 102	2
Physics 112	3
Physics 107	4
	17

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Physics 104E	4
Physics 108	4
	18

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Engineering 101	4
Physics 109	4
	18

Total: 146 credits

PRE-ENGINEERING

FRESHMAN I

	Credits
Engineering 13	3
*Mathematics 13 or 14	4
Chemistry 1	4
English 1, 3	4
Theology 1	2
Military Science 1	2
	19

**Engineering 21	
*** or Chemistry 21	4
†Engineering Elective (Surveying or Materials)	3
Mathematics 21 or 22	4
Physics 19	4
English 23	3
Theology 21	2
Military Science 3	2
	18 or 22

FRESHMAN II

	Credits
Physics 18	4
Mathematics 14 or 21	4
Chemistry 2	4
English 2, 4	4
Theology 2	2
Military Science 2	2
	20

Engineering 22 or Chemistry 22	4
Engineering 24	3
Mathematics 22 or 101	4
Physics 20	4
English 24	3
Theology 22	2
Military Science 4	2
	18 or 22

*Those students who demonstrate proficiency in algebra and trigonometry will begin their mathematics sequence with Mathematics 14.

**Engineering 21 and 22 is not recommended for students attaining a cumulative point average of less than 1.5.

***Chemical Engineers take Chemistry 21 and 22.

†Civil Engineers take Surveying, others optional.

Students who are not required to take Military Science or Theology may take a general study subject, such as history.

BACHELOR OF SCIENCE

Major in Accounting

FRESHMAN I

	Credits
English 1, 3	4
Business 1	4
Business 3	2
Modern Language 21	3
Theology 1	2
Military Science 1	2
	17

FRESHMAN II

	Credits
English 2, 4	4
Business 2	4
Business 4	2
Modern Language 22	3
Theology 2	2
Military Science 2	2
	17

SOPHOMORE I

English 23	3
Business 5	2
Business 21	2
Business 29	1
Economics 23	3
Theology 21	2
Military Science 3	2
History 1	3
	18

SOPHOMORE II

English 24	3
Business 6	2
Business 22	2
Business 30	1
Economics 24	3
Theology 22	2
Military Science 4	2
History 2	3
	18

JUNIOR I

Philosophy 101-102	5
Business 101	4
Business 103	3
Theology 101	2
Business 25	2
Business 105	3
	19

JUNIOR II

Philosophy 103-104	5
Business 102	4
Business 104	3
Theology 102	2
Business 26	2
Business 106	3
	19

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Business 126-127	4
Business 120-121	4
	18

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Business 122-123	8
	18

Total: 144 credits

BACHELOR OF SCIENCE

Major in General Business

Freshman I

	Credits
English 1, 3	4
Business 1	4
Business 3	2
Modern Language 21	3
Theology 1	2
Military Science 1	2
	17

Freshman II

	Credits
English 2, 4	4
Business 2	4
Business 4	2
Modern Language 22	3
Theology 2	2
Military Science 2	2
	17

Sophomore I

English 23	3
Business 5	2
Business 21	2
Business 29	1
Economics 23	3
History 1	3
Theology 21	2
Military Science 3	2
	18

Sophomore II

English 24	3
Business 6	2
Business 22	2
Business 30	1
Economics 24	3
History 2	3
Theology 22	2
Military Science 4	2
	18

Junior I

Philosophy 101-102	5
Business 103	3
Business 107	4
Business 25	2
Theology 101	2
Business 105	3
	19

Junior II

Philosophy 103-104	5
Business 104	3
Business 108	4
Business 26	2
Theology 102	2
Business 106	3
	19

Senior I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Business 126-127	4
*General Business Elective	4
	18

Senior II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
*General Business Elective	4
*General Business Elective	4
	18

Total: 144 credits

*Electives will be offered in either Finance (Bus. 130 to 139), Marketing (Bus. 140 to 149), Management (Bus. 150 to 159) or Economics concentrations, or in the General Business Electives (Bus. 160 to 169).

Courses of Instruction

DEPARTMENT OF FINE ARTS

Mr. Mann, Mr. Gallagher

The Courses in Fine Arts are designed to fulfill a two-fold purpose: 1) to provide instruction in applied art for students desirous of learning to draw and paint and for those who seek professional advancement in commercial art; 2) to provide a cultural background, appreciative and historical, affording a knowledge of canons for criticism and enjoyment, for students of all courses. At present the Department does not offer a major or minor program.

Art 5. *Art Appreciation* *3 credits*

A survey course devoted to the interpretation and appreciation of architecture, sculpture and painting. Egypt and Mesopotamia. Aegean civilization. Greece and Rome. Early Christian and Byzantine art. Romanesque and Gothic art.
Fall 1956

Art 6. *Art Appreciation* *3 credits*

A continuation of Art. 5. Renaissance architecture and sculpture. Italian schools of painting. Baroque art. Painting in the Low Countries and England. French painting from classicism to post-impressionism. Modern painting illustrated by cubism, non-objectivism, expressionism and surrealism.
Spring 1957

Art 7. *Music Appreciation* *3 credits*

This course is designed to present such information as is necessary for the intelligent enjoyment of the various forms of music. It includes a survey of musical history from the ancient period, including the ancient Greek, through the transition from the Greek to the early Christian Church and the Medieval period.
Not offered 1956-1957

Art 8. *Music Appreciation* *3 credits*

A continuation of Music 7. Treats the musical history of the fifteenth century and the rise of the national schools; instruments and instrumental music, the Romantic period, the twentieth century and music in America.
Not offered 1956-1957

DEPARTMENT OF BIOLOGY

Dr. Wolf, *Chairman*; Mr. Callaghan, Dr. Evans

Courses in the Department of Biology are designed to achieve the following objectives: 1. To further the general education of the individual by presenting the fundamental facts and concepts which are needed for an understanding of the living world and his relations to it. 2. To train the individual in

analytical thinking and to acquaint him with the operation of the "scientific method." 3. To develop habits of precision, accuracy, curiosity, critical evaluation, neatness and patience together with skill in laboratory techniques. 4. To prepare students for professional schools such as those of Medicine, Dentistry and allied fields or for advanced study or work in other biological fields.

Biol. 1 & 2. *General Biology* *8 credits*

This course is a comprehensive survey of all the types of living organisms from the standpoint of their structures, functions, development and relationships. Representatives of the important plant and animal phyla are studied from these aspects with major emphasis on the animal groups. The course also deals with general biological principles such as the nature of life, the organization of living beings, the problems of heredity, development and evolution. It is a prerequisite for all other courses given in the department unless the contrary is specifically indicated. 2 hours lecture and 4 hours lab each semester.
Fall and Spring

Biol. 3 & 4. *General Biological Sciences* *6 credits*

This is a cultural course in which general biological principles and problems are emphasized especially as they affect the human race and in relation to human problems. It covers, in less detail, the same subject matter as the preceding course and aims at the inculcation of a more generalized knowledge of the major biological principles. Demonstrations are used extensively to supplement laboratory work. 2 hours lecture and 2 hours lab each semester.
Fall and Spring

Biol. 7. *Anatomy and Physiology* *4 credits*

This is a non-technical presentation of the fundamentals of human anatomy and physiology in order to develop a correct understanding of the structure and function of the human body. There is no formal laboratory work or dissection; but demonstrations, charts, models and other visual aids are used extensively as supplementary material.
Evening—Not offered 1956-1957

Biol. 8. *Introduction to Personal Hygiene and Public Health* *4 credits*

This course is designed to give an understanding of the problems of personal hygiene and the care of the body, of the nature of disease and the principles of disease prevention. It considers the more common communicable diseases as to cause, mode of transmission, methods of control and prevention. The problems of alcoholism, narcotics, immunization, control of food and water supply, sewage disposal and public health administration are also discussed.
Evening—Not offered 1956-1957

Biol. 9. *Human Heredity* *3 credits*

This course presents the basic principles and concepts of heredity, stressing their practical application to the problems of human inheritance. 3 hours lecture and demonstrations.
Evening—Not offered 1956-1957

Biol. 21 & 22. *Comparative Vertebrate Anatomy* *8 credits*

The gross anatomy and phylogeny of the organ systems in the vertebrate organism are considered with special emphasis upon the mammalian type. Insofar as possible structure is correlated with function again with special reference to mammalian physiology. Type animals of the major vertebrate classes are studied in the laboratory with dissection confined to the shark, necturus, turtle, pigeon and cat. 2 hours lecture and 4 hours lab each semester.
Prerequisite: Biology 1 and 2.
Fall and Spring

Biol. 23. *Genetics* *4 credits*

The purpose of this course is to give the student a fundamental knowledge of the basic principles and modern theories of heredity as developed by experimental, biometrical and cytological methods. Consideration is given to the practical application of the laws governing inheritance in the fields of plant and animal breeding and human heredity. 2 hours lecture and 4 hours lab.
Spring 1957

Biol. 101. *General Botany* *3 credits*

This course deals with the four major subdivisions of the plant kingdom, studying representative types from the standpoint of structure and function and the illustration of biological principles. 2 hours lecture and 2 hours lab.
Prerequisite: Biology 1 and 2.
Not offered 1956-1957

Biol. 102. *General Zoology* *4 credits*

In this course a more detailed study is made of the animal organism with the work confined almost entirely to representatives of the invertebrate phyla. Detailed studies are made of structure and relationships. 2 hours lecture and 4 hours lab. Prerequisite: Biology 1 and 2.
Not offered 1956-1957

Biol. 103. *Histology* *4 credits*

This course is concerned primarily with the microscopic structure and the functioning relations of vertebrate tissues and organ systems with most attention devoted to the mammal. 2 hours lecture and 4 hours lab. Prerequisite: Biology 21 and 22.
Fall 1956

Biol. 104. *Microtechnique* *4 credits*

A course of training in the preparation of animal and plant tissues for microscopic examination. General methods of preparing histological specimens are covered in detail with special techniques included as time and interest permit. 1 hour lecture and 6 hours lab. Corequisite: Biology 103.
Fall 1956

Biol. 105. *Embryology* *4 credits*

A large part of the course is devoted to the early stages of development where gametogenesis, fertilization, cleavage, gastrulation and the formation of germ layers are treated from a comparative viewpoint. The development of general body form, of organs and of organ systems is then studied largely as it occurs in frog, chick and mammal. 2 hours lecture and 4 hours lab. Prerequisite: Biology 21 and 22.
Spring 1957

Biol. 120. *General Physiology* *4 credits*

This course deals with the basic principles and concepts underlying the functioning of the animal organism. The functions of the major organ systems are studied with special attention given to the correlation and integration of these processes in the organism. 2 hours lecture and 4 hours lab. Prerequisites: Biology 21 & 22, Chemistry 101-102, and Physics 1-2.
Fall 1956

Biol. 121. *Introductory Bacteriology* *4 credits*

Presented from the biological rather than from the strictly medical standpoint, this course is a study of bacteria as microorganisms whose life habits involve metabolic activities which have an important bearing upon human affairs. A survey of the pathogens is included with an introduction to the principles of immunology. 2 hours lecture and 4 hours lab. Prerequisites: Biology 21, 22, Chemistry 101-102, and Physics 1-2.
Spring 1957

Biol. 122. *Advanced Bacteriology* *4 credits*

This is an extension of the preceding course and involves a more detailed study of the principles and practices of bacteriology with emphasis upon the special cultural methods and tests employed in the growth and preparation of bacterial organisms. Consideration is given to serological tests and the principles upon which they are based. 2 hours lecture and 4 hours lab. Prerequisite: Biology 121.
Not offered 1956-1957

Biol. 123. *Biology Seminar* *1 credit*

The work of this course is based on recent advances in all fields of biological research and the discussion of basic problems of biology in the light of modern research results. The seminar method is used with each student contributing

prepared papers and taking part in discussions. One 2 hour discussion period. Prerequisite: 20 credits in Biology.
Offered on request

Biol. 124. *Undergraduate Research and Thesis* *1 credit*
Reserved for advanced students with satisfactory preparation in the biological and physical sciences who are desirous of acquiring methods in biological research. The subject of the problem, time and credits are to be arranged individually. Prerequisites: 20 credits in Biology, Chemistry 101-102, Physics 1-2.
Offered on request

Biol. 125. *Fundamentals of Parasitology* *3 credits*
The course is concerned with the classification, structure, reproductive life cycles and host relationships of the most common parasites of the animal phyla. Diseases and symptoms in relation to parasitic conditions of vertebrates will be stressed. Laboratory work includes the recognition and analysis of the various parasitic forms and media in which they are produced. 2 hours lecture and 2 hours laboratory. Prerequisites: 20 credits in Biology.
Not offered 1956-1957

DEPARTMENT OF BUSINESS ADMINISTRATION

Dr. Senker, *Chairman*; Mr. Artabane, Mr. Buckley, Mr. Charnagursky, Mr. Donovan, Mr. Doud, Mr. Houlihan, Mr. Katorkas, Mr. McGrail, Mr. McLean, Mr. O'Malley, Mr. Walsh, Mr. Zandarski

The courses in Business Administration are designed to achieve the following objectives:

1. To develop the cultural, intellectual and moral qualities of the student through an intensive study of cultural subjects and business problems.

2. To teach the student to think clearly and logically, and to develop his application of the analytical approach in solving current business problems.

3. To encourage individuality of thought and expression by the student, and thereby develop future civic and industrial leaders.

4. To impart a training for executive positions in the business world by the study of Accounting, Law and theoretical as well as applied Economics; to serve as a preliminary training for those wishing to enter the field of Law itself; and to intensively train those wishing to enter the field of public or private accounting.

5. To give preliminary training to those students who wish to pursue graduate courses in business.

Prerequisites for each course are to be adhered to except when in the opinion of the instructor or Department Head, concurred to by the Dean of Studies, the student has had sufficient background to warrant the waiver of the prerequisite.

ACCOUNTING

Bus. 1. *Elementary Accounting I* *4 credits*

Meaning and purpose of accounting. Development of the accounting equation. Detailed study of the balance sheet and profit and loss statement. The ledger record of business activities. Account and ledger technique, including complete bookkeeping procedures. Adjustments. The journal and its subdivisions. Special journals, their problems and expansion. Ledger subdivision and control accounts. Business papers, the first record of business transactions. Negotiable instruments. The worksheet and summary statements. Completing the ledger record. 4 hours lecture and 5 hours laboratory.
Fall 1956

Bus. 2. *Elementary Accounting II* *4 credits*

Partnership formation and operation. Division of profits. Financial statements of a partnership. Methods of admitting a new partner. Partnership dissolution and liquidation. Organization and operation of the corporation. Detailed study of classification and accounting techniques for capital stock, bonds, mortgages, sinking funds and reserves. Corporate financial statements and their preparation. Changing from a partnership to a corporation. The voucher system. Accounting for the manufacturing concern. Departmental accounting. Inventory valuation and control. Analysis and interpretation of financial statements. 4 hours lecture and 5 hours laboratory. Prerequisite: Bus. 1.
Spring 1957

Bus. 21. *Intermediate Accounting I* *2 credits*

A continuation of first year accounting and its application in more complex business situations. Comprehensive study of the fundamental accounting processes. Current assets and non-current assets. Detailed analysis of content and preparation of corporate balance sheets. 2 hours lecture and 3 hours laboratory. Prerequisite: Bus. 2.
Fall 1956

Bus. 22. *Intermediate Accounting II* *2 credits*

A continuation of Accounting 21. Comprehensive study of liabilities, capital stock and surplus. Errors and their correction. Statements from incomplete data. Statement analysis, special ratios and their measurement. Statement of application of funds. Partnership formation and operation. Partnership dissolution. 2 hours lecture and 3 hours laboratory. Prerequisite: Bus. 21.
Spring 1957

Bus. 101. *Advanced Accounting* *4 credits*

Special sales procedures. Installment sales, consignments, agency and branch accounting. Consolidations. A comprehensive study of consolidated balance sheets and profit and loss statements. Fiduciary and budgetary accounting.

Statement of affairs. Receivership accounts and statements. Accounting for estates and trusts. Accounting for governmental units. 4 hours lecture and 5 hours laboratory. Prerequisite: Bus. 22.
Fall 1956

Bus. 102. *Cost Accounting* *4 credits*
Basic principles of cost accounting and their practical application in the development of cost accounting procedures. The principles of process costs, specific order costs, and standard cost systems. Practical application of process cost and specific order cost systems. Principles of estimated cost systems and the development of budgets as a basis for cost control. Specialized cost treatments. Reports for executive direction. 3 hours lecture and 2 hours credit laboratory. Prerequisite: Bus. 22.
Spring 1957

Bus. 120-121. *Auditing Theory and Applications* *4 credits*
The verification of accounts and their presentation in financial statements. A review of "generally accepted accounting principles" and an introduction to applicable auditing standards. Types of audits, audit programs, the preparation of reports, and the ethics of the profession. Review of internal controls. The preparation and indexing of working papers. Types of reports currently employed. Summarization by a complete audit of a specific case. 3 hours lecture and 2 hours credit laboratory. Prerequisite: Bus. 22.
Fall 1956

Bus. 122. *Federal Taxation and Procedure* *4 credits*
The federal system of taxation insofar as it concerns the individual taxpayer. The nature of taxable income. A study of the Internal Revenue Code, regulations and selected materials relating to individual tax accounting. The preparation of Internal Revenue Form 1040. Pay-as-you-go Federal Tax System and required returns. Gross income, items included and excluded. Allowable deductions and credits. Filing of returns. Specialized tax accounting requirements for the individual businessman. 4 hours lecture. Prerequisite: Bus. 101-2.
Spring 1957

Bus. 123. *Federal Taxation and Procedure* *4 credits*
A study of the Internal Revenue Code, regulations and selected materials relating to partnerships, estates and trusts, and corporations. The taxing powers and tax systems of states and their municipal subdivisions; state income, municipal income, capital stock, franchise, loans, bonus, escheat, personal property and real property taxes. Federal estate tax and state inheritance and estate taxes. Miscellaneous federal taxes and the Social Security System. 4 hours lecture. Prerequisite: Bus. 122.
Spring 1957

Bus. 124. *Accounting Systems* *3 credits*

Principles of installation and procedure. Basic principles and procedure underlying all system work with emphasis upon the preliminary survey of a business. Principles of internal check. System work in the accounting for cash receipts, cash payments, merchandise purchases, merchandise sales, payrolls, special journals, ledgers and statements. The systems report. The second part of this course is devoted to the "important phases" of accounting systems of the more popular types of business, starting with the simplest ones. A study is made of the problems, systems and reports of Contractors, Retail Stores, Building and Loan Associations, Commercial Banks, Insurance Companies, Railroads, Motor Carriers, Air Transportation Companies, Manufacturing concerns, and Municipalities. 2 hours lecture and 2 hours credit laboratory. Prerequisite: Bus. 123.

Spring 1957

FINANCE

Bus. 103. *Money and Banking* *3 credits*

A general survey of the field of money, credit and prices and an introduction to the study of commercial banking. Evolution of money media, functions of money, monetary standards and the present monetary system of the United States. Commercial banking operations and the use of bank credit in financing business. History of banking in the United States. The operations of a commercial bank. Banking transactions. Recent legislation affecting money, credit and banking in the United States. Prerequisite: Econ. 24.

Fall 1956

Bus. 104. *Money and Banking* *3 credits*

A detailed study of commercial bank operations. Bank reserves, deposits and bank notes. Loans and Discounts. Bank Investments. The credit department. Interbank relations including chain, group and branch banking. The Clearing House and the Par Collection System. The Federal Reserve System. The money markets. Foreign exchange and the methods of financing foreign trade. The Banking System of the United States. Banking problems of today. Prerequisite: Bus. 103.

Spring 1957

Bus. 126-127. *Corporate Financial Management* *4 credits*

The financial structure and problems of the modern business corporation. Common types of securities. Promotion, including the parts played by promoters, investment bankers and security dealers. The security markets. Circulating capital and its relationship to financial management. Determination, management and distribution of income. Financial problems of expansion including changes in the financial plan. Securing funds for expansion. Failure of corporations, reorganizations, readjustments, and receiverships. Bankruptcy and liquidation. Prerequisite: Bus. 135 or 104.

Fall 1956

Bus. 130. *Investment Banking* *4 credits*

The organization and work of investing institutions, institutional investors, mortgage banking houses and the stock exchanges. The theory of investment banking and its relation to the business cycle, to credit analysis and to the money market. The practices of investment houses, including the work of negotiation, purchase, underwriting and distribution of new issues. The effect of recent security legislation on investment banking practices. Prerequisite: Bus. 104.
Not offered 1956-1957

Bus. 131. *Insurance* *3 credits*

The underlying principles upon which all forms of insurance are based. The most common policies affecting the individual purchaser of insurance and the business man are thoroughly analyzed. Life, Fire and allied lines, Casualty (including General Liability, Automobile Liability, Comprehensive Liability, Workmen's Compensation, Fidelity and Surety Bonds), Accident and Health (including Hospitalization) and Marine Insurance.
Fall 1956

Bus. 132. *Investments* *4 credits*

The distinction between the various types of investment securities. Mathematics of investments. Protection of the purchaser in buying, holding and refunding securities. The application of the recognized tests of safety, income and marketability in their selection. Underlying principles in the analysis of government, municipal, railroad, utility, industrial, bank, insurance company, real estate and foreign securities. Effects of recent and current legislation on investment procedure. Prerequisite: Bus. 104.
Spring 1957

Bus. 133. *The Money Markets* *4 credits*

The historical development and functions of the money markets of the world, their relationship to international banking and to the capital market. The structure and operation of the several components of the New York money market and their relationship to the financial activities of the U. S. Treasury and the Federal Reserve Banks. Prerequisite: Bus. 104.
Not offered 1956-1957

Bus. 134. *Public Finance* *4 credits*

The development of public finance. Public revenues, including the general property tax, the income tax, death and gift taxes, taxes on business, taxes on consumption, motor vehicle taxes, the poll tax, social security taxes and taxes on natural resources. Shifting and incidence of taxation. Public credit. Public

expenditures, including state and federal aids, public works and public welfare. Problems of public borrowing. Fiscal administration, fiscal policy and the business cycle.
Not offered 1956-1957

Bus. 161. *Credits and Collections* *4 credits*
The handling of credits and collections for the different types of business organizations. Establishment and verification of the credit position of a firm or individual. Sources of credit information. A review of the law of credit instruments. The Credit letter. The Collection letter. Collection methods. The place of bank credit departments in determining a line of credit. Prerequisite: Econ 24.
Not offered 1956-1957

Bus. 163. *Personal Finances* *4 credits*
A survey of the field of financing the consumer. Spending vs. Saving. The value of money. Budgeting income. Charge accounts and installment buying. Personal income taxation. Your bank account and the transfer and safekeeping of funds. Property, accident and health insurance. Savings institutions and instruments. The securities markets and principles of investment. Life insurance, pension plans and social security. Home ownership. Estates and wills. Prerequisite: Bus. 135.
Not offered 1956-1957

GENERAL BUSINESS

Bus. 29. *Introduction to Business* *1 credit*
A survey and orientation course designed for the student to enable him to select a major field of concentration. The background of business. Basic tools useful in business administration. The forms of business organization. Techniques of business administration. 2 hours per week.
Fall 1956

Bus. 30. *Introduction to Business* *1 credit*
A continuation of Business 29. The product to be marketed. Physical facilities of plant, equipment and layout. The working force and its control. Financing the business. The production process. Selling the product. Internal control. Business risks. Business growth. Business policy. 2 hours per week.
Spring 1957

LAW

Bus. 5. *Business Law—Contracts* *2 credits*
Introduction to the study of Law. Its nature, administration and the various tribunals. Nature of a contract. Statutory and case law principles of contracts. Formation of a contract by offer and acceptance. Consideration.

Capacity of parties. Unenforceable contracts. Statute of Frauds. Performance of contracts—conditions and excuses for non-performance. Rights of third parties. Assignments.
Fall and Spring

Bus. 6. *Business Law—Negotiable Instruments* *2 credits*
Statutory and case law principles of Negotiable Instruments. Types of negotiable instruments. Issuance and negotiation of promissory notes, drafts and checks. Holders in due course. Rights and liabilities of parties to negotiable instruments. Sales of personal property. Passage of title, risk of loss and seller's warranties. Rights and remedies of unpaid seller. Prerequisite: Bus. 5.
Fall and Spring

Bus. 25. *Business Law—Agency and Partnership* *2 credits*
Statutory and case law principles of Agency and Partnerships. The creation of the agency relationship. Rights, duties, powers and liabilities of principal, agent and third parties in relation to each other. Partnership characteristics. Rights, duties, powers and liabilities of partners among themselves and in relation of third parties. Partnership dissolution. Prerequisite: Bus. 5.
Fall 1956

Bus. 26. *Business Law—Corporations* *2 credits*
Statutory and case law principles of corporations. Organization of corporations. Corporate powers, by-laws and duties. Rights, duties, powers and liabilities of directors, officers and shareholders. The legal aspect of corporation finance. Statutory and case law principles of real property. Prerequisite: Bus. 25.
Spring 1957

MANAGEMENT

Bus. 108. *Industrial Organization and Management* *4 credits*
The principles and problems of the business enterprise from the executive point of view. The economic background of management. Theory of specialization, simplification, standardization, diversification, expansion, contraction and integration. The organization of the industrial plant and principles of management. To acquaint the students with various processes and methods of manufacture, frequent use is made of visual aids and factory trips where possible. No prerequisite.
Spring 1957

Bus. 144. *Industrial Purchasing* *4 credits*
This course is designed to cover procurement by manufacturers, wholesalers and retailers engaged in private industry. Topics covered include a survey of the field with emphasis on the increasing recognition being given to industrial procurement; the organization necessary for procurement; the determina-

tion of quality inspection of purchases; inventory control methods; price policies; forward buying and speculation; and the procurement budget. The classroom discussion will be supplemented by cases which will be designed to show not only the problems of procurement but also its interrelationship with the other necessary functions of a business establishment.
Not offered 1956-1957

Bus. 150. *Traffic Management* *4 credits*
This course combines the economics of transportation and the work of the traffic manager. Types of carriers, including railroad, motor, pipe line, air and water. Freight classification, rates, tariffs, special services, regulation, tracing, expediting, claims, and procedures before regulatory bodies for each type of carrier. Prerequisite: Econ. 24.
Not offered 1956-1957

Bus. 151. *Industrial Engineering and Factory Management* *4 credits*
Review of the basic principles of organization and their application to the functions and personnel of the production department of the modern plant. Plant location, building design and size. Equipment layout and control. Material handling equipment. Inspection and maintenance of equipment. Illumination, ventilation, air-conditioning, heating and power supply. Job study analysis and time and motion study. Wage systems, incentives and control of labor costs. Prerequisite: Bus. 108.
Not offered 1956-1957

Bus. 152. *Material and Production Control* *3 credits*
Material control, purchasing methods and storeskeeping. Quantity and quality control, inspection and standards for material. Production planning and control to include planning, routing, scheduling, dispatching and follow-up of work. Gantt charts, including progress, machine layout, machine load, man record and machine record charts. Schedule and control boards. Tool storage and control. Production budgets, control of production costs and product development and research. Prerequisite: Bus. 151.
Fall 1956

Bus. 153. *Personnel Administration* *4 credits*
The management of personnel for industrial types of organizations. The background of personnel management. Job analysis, classification and evaluation. Incentive wage systems and merit rating. Sources of supply of workers, selection, interviewing, testing, transfer, promotion and training. Dealing with unions. The Labor-Management Relations Act of 1947. Safety and health, economic security, and service activities. Research and statistics on personnel. Prerequisite: Bus. 108.
Fall 1956

Bus. 154. *Real Estate Management* *3 credits*

The fundamentals and problems of the real estate business. Setting up the real estate office. Qualifications of the real estate salesman and broker. Definitions of words and terminology used in the real estate business. Preparation for real estate salesman's license. Prerequisite: Bus. 26.
Fall 1956

Bus. 155. *Office Management* *4 credits*

This course covers the practical duties of the office manager. His work is viewed toward achieving greater economy and efficiency. The working departments of the office, filing, transcription and general service. Office planning, layout and equipment. Office manual and training. Office costs and budgets. Personnel problems including selection, hiring, transfer, promotion, job analysis, evaluation, classification, and salary schedules. Office systems, routines and procedures. Prerequisite: Econ. 24.
Spring 1957

Bus. 156. *Advanced Real Estate Management* *3 credits*

Preparation for real estate broker's license. Selling, leasing, managing, buying and appraising various types of real estate. Servicing mortgages from the standpoint of physical maintenance and management. Preparation for Court testimony on real estate values. Occupancy surveys. Prerequisite: Bus. 154.
Spring 1957

Bus. 158. *Retail Store Personnel Administration* *4 credits*

A complete survey of personnel administration in the department store and retail field, including the principles and procedures of personnel management currently in use or recommended for successful retail establishments. Emphasis is placed on the retail store viewpoint and on the personnel problems in the retailing field, such as selecting, training, compensating and motivating employees in retail stores, as well as testing, job evaluation, merit rating and other phases of personnel management. A survey of the development of employee representation and labor unions in this field is included. Current practice is illustrated. Prerequisite: Bus. 108.
Not offered 1956-1957

Bus. 159. *Wage and Salary Administration* *3 credits*

A general survey of the problem of setting and administering a wage and salary program. Job analysis and various methods of determination. Job evaluation and grading. Study of different types of job evaluation programs. Rate setting and wage classification. Wage incentives and their use as a result of a time and motion study. Administration of salary and wage programs. Prerequisite: Bus. 153.
Not offered 1956-1957

Bus. 160. *Business Policy* *4 credits*

The aim of the course is to co-ordinate the work given in the specialized business courses, to show the interrelation between economic theory and business problems, and to indicate the place of public relations in management. Actual cases in business problems are analyzed and studied, and individual research in business problems is conducted by the student. Prerequisite: Econ. 24.
Spring 1957

Bus. 162. *Public Relations and Communications* *4 credits*

The place of public relations in the management field. An analysis of the various publics with which management must concern itself—stockholders, employees, consumers, community, government, suppliers, dealers, press, radio and television—and how to deal effectively with each of these publics. Principles of effective communication to include opinion polls, oral statements, effective letters, and press releases. Aids to a public relations program such as speaker bureaus, special events, employee publications and stockholders' reports are illustrated. Prerequisite: Bus. 167.
Spring 1957

Bus. 164. *Public Relations Workshop* *3 credits*

A continuation of Bus. 162. An analysis of the various techniques employed by public relations specialists to "win over" and enlist the support of the various publics. Research, including opinion polls, oral communications, effective letters, press releases to newspapers, radio, television and other means of communication. Speakers bureaus, special events, employee publications, stockholders' reports, etc. Field trips and motion pictures wherever applicable to subject matter covered and helpful to the student are included in the course. Prerequisite: Bus. 162.
Not offered 1956-1957

MARKETING

Bus. 107. *Marketing* *4 credits*

The distribution of a product from its very inception to its use by the ultimate consumer. Co-operative marketing, the marketing problems of the individual business, market research and analysis and the choice of marketing channels. All problems are reviewed in the light of the marketing systems of the United States with direct emphasis upon selling through chains, wholesalers, jobbers and direct distribution to retailers and consumers.
Fall 1956

Bus. 140. *Advertising* *4 credits*

The scope and function of advertising from both the mechanical and managerial points of view. The actual practice of preparing layouts, copywriting and proofreading is combined with the analysis of sales problems and policies

within a company. The various advertising media such as newspapers, magazines, direct mail, radio and television reviewed in the light of practical problems. Prerequisite: Bus. 107.
Fall 1956

Bus. 141. *Retail Merchandising* *4 credits*
The practices and procedures directly concerned with the buying and selling of goods at retail for a profit. Particular emphasis is directed toward present day buying methods of a variety of retail merchandise. The problems of store layout, pricing, customer and product analysis and inventory control are subjected to close scrutiny through the medium of actual cases. Prerequisite: Bus. 107.
Spring 1957

Bus. 142. *Retail Store Management and Operation* *4 credits*
The theory and problems of managing a retail store from the store manager's point of view. The statistical aspect of retailing, including a review of operating expenses, budgetary control and wage costs. Systematic procedures in the receiving department, handling the goods, the service division, the adjustments department and the credit department. Purchasing policies and procedures. Minimizing operating expenses. Prerequisite: Bus. 107.
Spring 1957

Bus. 143. *Salesmanship* *4 credits*
Creative salesmanship covers the techniques of prospecting, approach, presentation, demonstration, handling objections, closing and follow-up of customers. Discussions, sales training films and workshop applications provide the basis for an understanding of how these proved methods are applied in modern selling. Prerequisite: Bus. 107.
Spring 1957

Bus. 145. *Advertising Layout and Production* *3 credits*
Continuation of Bus. 140. Principles of effective layout; getting the idea of mental image, making "thumbnail sketches," rough and comprehensive layouts; analysis of product to determine best advertising appeals; actual creation of advertisements, step by step, including writing copy, making layout, selecting type and paper, etc.; planning advertising campaigns (including research and budget); analysis of current campaigns of major advertisers; preparing advertisements for newspapers, magazines, radio and television, billboards, etc.
Fall 1956

Bus. 146. *Sales Management* *4 credits*
The development of the habit and technique of passing judgment on the types of problems which actually confront the sales executive. Special attention will

be given to a practical discussion of the problems of Sales Programs, Sales Promotions, the Management of the Sales Force, Sales Control, Sales Planning, Sales Research and Merchandising. Prerequisite: Bus. 107.
Not offered 1956-1957

MATHEMATICS

Bus. 3. *Business Mathematics* *2 credits*

A study of mathematics which will aid the student in accounting, statistics and other required business courses on the college level. Fundamental processes and short methods for the accountant. Checking computations. Factors and multiples. Common fractions. Percentage in all its applications. Cash, trade and bank discounts. Simple interest. Partial payments. Business insurance.
Fall and Spring

Bus. 4. *Business Mathematics* *2 credits*

A continuation of business mathematics with particular emphasis on computations necessary for the solution of accounting problems. Account current. Storage. Inventories. Gross profit computations. Analysis of statements. Fundamentals of algebra. Ordinary annuities. Business finance. Public finance and taxation. Prerequisite: Bus. 3.
Fall and Spring

STATISTICS

Bus. 105. *Business Statistics* *3 credits*

Statistical methods, their importance and use in the modern business enterprise. Cautions in their use and interpretation. Initiating and conducting a statistical investigation. Use of mechanical equipment in the determination and preparation of statistical findings. Sampling and the concept of error. Tabular and graphic representation of statistical data. The frequency distribution. Averages. Dispersion and Skewness. Dispersion of statistics computed from samples. 2 hours lecture and 2 hours laboratory.
Fall 1956

Bus. 106. *Business Statistics* *3 credits*

Introduction to the theory of probability; application to statistical problems. Index number construction. Current indices used to measure business activity, prices, wages, cost of living, etc. Time series analysis. Related time series. Correlation and forecasting. The application of statistical methods to the analysis of business data and industrial problems. Frequent use of mechanical equipment in an endeavor to facilitate the computation of data needed for time series analysis and index number construction. 2 hours lecture and 2 hours laboratory.
Spring 1957

Bus. 165. *Statistical Quality Control* *4 credits*

An introduction to statistical methods of quality control. The theory of probability. The use of quality control charts for variables and attributes. A study of distribution and the theory of sampling, with applications to problems in regression analysis and statistical quality control. Problems of definitions; planning, organizing and installing quality controls in typical manufacturing plants. Prerequisite: Bus. 109.

Not offered 1956-1957

DEPARTMENT OF CHEMISTRY

Mr. Burti, *Chairman*; Mr. Appleton, Fr. Casey, S.J., Mr. Waters

The aims of the department are: 1. To train students to think accurately and logically, to develop an analytical type of mind, and to inculcate the scientific method of attacking problems not only in chemistry but in other fields of endeavor. 2. To develop character traits such as patience, pertinacity, honesty and neatness, which are indispensable to the non-scientist as well as the scientist. 3. To train the student for a position carrying some degree of responsibility, either as an advanced student in a graduate or professional school or as a member of the staff of an educational, industrial or research institution.

Chem. 1 & 2. *Inorganic Chemistry* *8 credits*

A study of the laws, theories and principles of General Chemistry with a survey of the principal elements and their important compounds. Laboratory work exemplifies the classroom discussion. 3 hours lecture and 3 hours lab each semester.

Fall and Spring

Chem. 4. *General Physical Science—Chemistry* *3 credits*

An introductory study of chemical science, its progress and contribution to modern civilization. The course offers an adequate treatment of experimental facts, scientific theories and generalizations concerning the chemical nature of matter, its composition and changes in composition. For non-technical students. Student participation in laboratory exercises and demonstrations will supplement the lecture material. Three hours lecture and demonstration per week.

Spring 1957

Chem. 21. *Qualitative Analysis* *4 credits*

A study of the principles of ionization, oxidation-reduction, solubility product and complex-ion formation. The laboratory work involves the semi-micro technique in the detection and separation of cations and anions. 2 hours lecture and 6 hours lab. Prerequisites: Chem. 1 and 2.

Fall 1956

Chem. 22. *Quantitative Analysis* *4 credits*
A survey of the general principles of gravimetric, volumetric and electrolytic analyses. Laboratory work stresses technique. 2 hours lecture and 6 hours lab. Prerequisites: Chem. 1, 2.
Spring 1957

Chem. 101 & 102. *Organic Chemistry* *8 credits*
An introduction to the chemistry of the principal aliphatic and aromatic compounds of carbon and their derivatives. Laboratory work includes investigation of the chemical properties of the compounds studied, and several of the more important organic preparations. Prerequisites: Chem 1 and 2. 2 hours lecture and 6 hours laboratory each semester.
Fall and Spring

Chem. 103. *Advanced Organic Chemistry* *4 credits*
A continuation of Chem. 101-102, including a study of the alicyclics and heterocyclics, the organic dyes and the naturally occurring compounds of carbon. Laboratory work will consist of a number of the more difficult syntheses and will require some investigation of the original literature. 2 hours lecture, 6 hours laboratory. Prerequisites: Chem. 101 and 102.
Fall 1956

Chem. 106. *Advanced Inorganic Chemistry* *2 credits*
A detailed study of the chemical properties of elements with regard to the electronic structures and sizes. The Periodic System is the basis for such study. Two hours lecture. Prerequisites: Chem. 1 and 2 and Chem. 123 and 124.
Not offered 1956-1957

Chem. 121 & 122. *Physiological Chemistry* *6 credits*
A study of the nature and important reactions of carbohydrates, fats, proteins; their digestion, absorption and metabolism in the body. 2 hours lecture and 3 hours lab each semester. Prerequisites: Chem. 101, 102 and Chem. 21.
Fall and Spring

Chem. 123 & 124. *Physical Chemistry* *8 credits*
A study of the physico-chemical properties of matter and the dynamics of chemical reactions. Laboratory experiments illustrate the principles studied. 3 hours lecture and 3 hours lab each semester. Prerequisites: Chem. 21, 22; Math. 21, 22.
Fall and Spring

Chem. 125. *Advanced Quantitative Analysis* *4 credits*
A survey of advanced methods of analysis using specialized apparatus. The analysis of alloys, ores and mixed salts is emphasized. 2 hours lecture and 6 hours lab. Prerequisites: Chem. 21 and 22.
Fall 1956

Chem. 126. *Organic Analysis* *4 credits*

A study of systematic classification and identification of organic compounds from their solubilities and group reactions, including the separation and identification of the components of organic mixtures. 2 hours lecture and 6 hours lab. Prerequisites: Chem. 101 and 102.
Spring 1957

Chem. 127. *Chemical Literature* *1 credit*

A study of the published source material of chemical science and chemical industry. The course includes practical instruction in library technique. One hour lecture.
Fall 1956

Chem. 129 & 130. *Thermodynamics for Chemists* *4 credits*

A study of the laws of thermodynamics. A detailed consideration of the application of the laws and relationships evolved from the laws and states of matter, phase changes, solutions of non-electrolytes and electrolytes, and chemical reactions. Two lectures each semester. Prerequisites: Chem. 123 and 124.
Fall and Spring

Chem. 132. *Undergraduate Research* *2 credits*

Individual study and research in connection with a specific chemical problem. The course taken with the permission of the Chemistry Department Staff. Prerequisites: Chem. 124, 126 and 127.
Spring 1957

DEPARTMENT OF CLASSICAL LANGUAGES

Mr. Mann, *Chairman*; Mr. Sweeney, S.J.

The objectives of the Classical department are: first, to develop in the student the ability to read easily and to compose readily in Latin and Greek; secondly, through the discipline afforded by the tongues of Greece and Rome to train the student in habits of accurate observation, orderly procedure, analysis, logical and inferential thinking; thirdly, to develop the student's powers of appreciation and expression by a thorough study of the artistry of classical literature; and finally to give him a comprehensive understanding of the human values of Graeco-Roman culture in both its pagan and patristic phases and of its profound contributions to modern civilization.

I. GREEK

Greek 1. *Elementary Greek* *3 credits*

An intensive course in the fundamentals of Classical Greek grammar with emphasis on parsing and syntax.
Fall 1956

Greek 2. *Elementary Greek* *3 credits*
A continuation of Greek 1. Readings and composition illustrate grammatical principles.
Spring 1957

Greek 3. *Xenophon* *3 credits*
Selections from the Anabasis furnish an eye-witness account of the march of the Ten Thousand through the Persian Empire.
Fall 1956

Greek 4. *Plato* *3 credits*
The Apology and selections from the Crito and Phaedo are read.
Spring 1957

Greek 21. *Socrates and Plato* *3 credits*
Readings in the Apology, Crito and Phaedo, supplemented by extra work in the Republic. An analysis of Socrates and his pupil Plato, showing their position in the history of Western thought.
Not offered 1956-1957

Greek 22. *The Drama and Euripides* *3 credits*
A history of Greek drama from its origins to Euripides. A consideration of the canons of Greek drama as presented by Aristotle in the Art of Poetry. An evaluation of Euripides as poet, dramatist and thinker through a reading of his major works.
Not offered 1956-1957

Greek 31. *Sophocles* *3 credits*
A detailed study of Oedipus Tyrannus as a masterpiece of dramatic art with an analysis of the structure, spirit and character-delineation of Greek tragedy as developed by Sophocles. Additional reading of Electra and Antigone.
Fall 1956

Greek 32. *Demosthenes* *3 credits*
Reading of the Philippic and Olynthiac orations, providing a background for the major study of the Crown Oration as a model of rhetoric, together with a discussion of Classical oratory as found in Aristotle's Rhetoric.
Spring 1957

Greek 101. *Homer's Iliad* *3 credits*
A reading course in the master-epic of Homer with emphasis on oral reading of the original in class and on the undying humanity of the characters represented.
Not offered 1956-1957

Greek 102. *Homer's Odyssey* *3 credits*

A reading course covering the entire scope of the Odyssey with special stress being laid on the rhythm and music of Homer's verse.
Not offered 1956-1957

Greek 103. *Greek Philosophy* *3 credits*

Greek philosophical thought from Thales down to the Neoplatonism of Plotinus. Special consideration is given to Plato and Aristotle and their contributions to the moulding of Western thought.
Fall 1956

Greek 104. *Patristic Greek* *3 credits*

Early Christian thought as found in the writings of Ignatius of Antioch, Polycarp, Cyril of Jerusalem, along with selections from the Epistles of St. Paul and the New Testament.
Spring 1957

Greek 109 (110). *Reading in Greek Literature* *3-6 credits*

Selections from Greek writers to suit the student's special interest. Paper required. Course given by special arrangement.
Fall and Spring

II. LATIN

Latin 1. *Elementary Latin* *4 credits*

An intensive course in the fundamentals of Latin grammar with an insistence upon parsing and syntax.
Fall 1956

Latin 2. *Elementary Latin* *4 credits*

An introduction to Caesar while continuing the fundamentals of grammar.
Spring 1957

Latin 3. *Intermediate Latin* *4 credits*

Readings in Latin together with daily composition work designed to give the student facility in handling the basic idioms and constructions of the language. An introduction to Cicero is given.
Fall 1956

Latin 4. *Cicero* *4 credits*

Readings from the speeches of the great Roman lawyer. His rhetoric as exemplified in the Catilinarian speeches. Political history and institutions are discussed.
Spring 1957

Latin 21. *Latin Poetry* *4 credits*

A detailed study of Cicero's Pro Archia Poeta as an eloquent defense of the literary spirit. Readings in the Aeneid with a comparative study of the great epics of other languages. Emphasis is laid on the poetic values of the work, on its presentation of the Roman spirit and on its abiding humanity.
Not offered 1956-1957

Latin 22. *Horace, Catullus* *4 credits*

In reading the Odes of Horace and the poetry of Catullus attention is concentrated on two main points, development of the power to appreciate aesthetically the lyric beauty of the poems and a deeper understanding of the pagan attitude to life both in its virtues and its shortcomings.
Not offered 1956-1957

Latin 31. *Roman Satire* *4 credits*

Horace and Juvenal interpret the life, manners and thought of their times: a revealing study of the unity of human nature in all times.
Fall 1956

Latin 32. *Cicero: Rhetoric* *4 credits*

Cicero's Pro Lege Manilia and Pro Milone are studied from the standpoint of rhetorical analysis, special attention being given to the structure and development of these speeches as well as to the social and political problems of the declining Republic.
Spring 1957

Latin 101. *Latin Comedy* *3 credits*

Reading and Idiomatic translation of one play of Plautus and one of Terence. Development and technique of play production in Rome. Lectures on Roman comedy, its relation to Greek drama and its influence on modern comedy. Plautus and Terence are contrasted not only as to point of view and literary style, but also as to the different groups for which they wrote.
Not offered 1956-1957

Latin 102. *Tacitus* *3 credits*

Selections from the Annals and Histories provide an effective study of forceful style and a wealth of stimulating observations on the progress of empire.
Not offered 1956-1957

Latin 103. *Roman Philosophy* *3 credits*

Readings from Cicero's Tusculan Disputations and Lucretius' De Rerum Natura to illustrate contrasting developments in Roman thinking. The course includes a brief survey of ancient philosophy.
Fall 1956

Latin 104. *Patristic Latin* *3 credits*

The Confessions or City of God of St. Augustine, with selections from other Latin Fathers, will be read in a study of the development of Late and Christian Latin. The course includes a survey of early Christian thought and its reaction to contemporary paganism.

Spring 1957

Latin 109 (110). *Readings in Latin Literature* *3-6 credits*

Selections from Latin writers to suit the student's special interest. Paper required. Course given by special arrangement.

Fall and Spring

DEPARTMENT OF EDUCATION AND PSYCHOLOGY

Dr. Lennon, *Chairman*; Mr. Benson, Dr. Bourne, Mr. Budash, Mr. Langan, Mr. Lilly, Fr. Sponga, S.J.

The aims of the Department of Education and Psychology are: (1) to develop in the individual those professional qualities required for successful teaching; (2) to offer professional training for certification as a secondary school teacher; (3) to meet requests for specific courses by teachers in service; (4) to present a co-ordinated undergraduate program in psychology for the student interested in graduate work in psychology or related fields; (5) to aid in the professional development of teachers by presenting a well integrated program of graduate studies leading to the Master of Arts degree.

The Department of Education and Psychology passes upon the eligibility of each student who applies for teacher education.

Students in the Education Curriculum working for a college provisional certificate for secondary school teaching in Pennsylvania are required by the University to pass successfully Education 101, 103, 105, 107 and 111 in addition to eighteen semester hours in each of two subject matter fields.

Practice teaching will be arranged for students who meet course requirements and have the other necessary qualifications:

(1) A general academic record of at least C.

(2) A quality point average of 1.5 in the student's teaching fields.

(3) Approval of applicants by respective department heads.

(4) Evidence of good personality.

(5) Competence in both written and oral English. Tests may be administered.

Educ. 101. *Special Methods of Teaching in High School* *3 credits*

The selection and organization of content of high school courses and the classes are taught in laboratory practice. Special methods of instruction for the various subject matter fields. This course must be taken concomitantly with Education 105. Prerequisites: Educ. 103 and 111.

A. Methods of Teaching of Social Studies.
B. Methods of Teaching English.
C. Methods of Teaching Modern Languages.
D. Methods of Teaching Science.
E. Methods of Teaching Mathematics.
Fall 1956

Educ. 103. *Introduction to Education* *3 credits*
An orientation course for all students who plan to enter the teaching profession. Emphasis is placed upon the evolution of the public school system, democratic principles, objectives, curriculum, the learner, the function of the teacher and professional requirements.
Fall 1956

Educ. 104. *History of Education* *3 credits*
A survey of educational development from primitive times to the present. The aim of the course is to trace the development of present tendencies from primitive society, Greek and Roman education, the Renaissance and the changes induced by realism, philanthropic education, the psychological and scientific movements. Contributions to modern educational practice are noted.
Spring 1957

Educ. 105. *Principles and Techniques of High School Teaching* *3 credits*
A secondary school methods course emphasizing principles and methods of teaching such as socialized recitation, project and problem methods, visual instruction, differentiated instruction and assignment. This course to be taken concomitantly with Education 101. Prerequisites: Education 103 and 111.
Fall 1956

Educ. 106. *Tests and Measurements* *3 credits*
A practical course giving the history of the testing movement, general principles and criteria of measurement and evaluation. Practice is afforded in the construction of different forms of test questions. A limited presentation of fundamental statistics is taught for the correct handling of test data.
Fall 1956

Educ. 107. *Observation and Practice Teaching* *6 credits*
Observation and study of classroom teaching are combined with actual student teaching under expert supervision. Group conferences and personal interviews are held frequently with the supervisor of practice teaching. The student teacher is expected to take part in all school activities. Prerequisites: Education 103, 105, and 111.
Spring 1957

Educ. 111. *Educational Psychology* *3 credits*
An introductory course in educational psychology stressing growth and development, individual differences, intelligence, motivation, learning principles, transfer of training and educational measurement. Prerequisites: Psychol. 120 or Philos. 105.
Spring 1957

PSYCHOLOGY

Psych. 120. *General Experimental Psychology* *3 credits*
An introductory course designed to acquaint the student with basic concepts of experimental psychology, emphasizing facts, principles and methods.
Fall 1956

Psych. 121. *Experimental Psychology; Laboratory* *3 credits*
Lectures cover topics of sensation, perception, memory, reasoning. The student will perform experiments dealing with these topics in the laboratory. Lecture 2 hours; laboratory 2 hours. Prerequisite: Psych. 120.
Spring 1957

Psych. 122. *Applied Psychology* *3 credits*
Applications of principles from experimental psychology to industry, vocational guidance, education, business, selling, advertising, personnel practices, welfare and child study.
Fall 1956

Psych. 123. *Social Psychology* *3 credits*
A study of social aspects of personality; the development and manifestations of social awareness; suggestion, imitation, group behavior and the individual mechanisms of social adjustment.
Spring 1957

Psych. 124. *Industrial Psychology* *3 credits*
General Survey of applied psychology. The principles and techniques in selection and management; job analysis; occupational descriptions; employment procedures; interviews, tests, inventories, counseling; industrial training, promotions, transfers, prevention of accidents; management employee relations. Prerequisite: Phil. 115.
Not offered 1956-1957

GRADUATE-UNDERGRADUATE COURSES

The following courses in Education and Psychology are open to both graduate and undergraduate students:

Educ. 151. *Educational Statistics I* *3 credits*

Frequency of distribution, measures of central tendency, measures of variability, cumulative distribution, graphs, the normal probability curve are topics treated in this course. Frequent application is made to practical school situations.

Fall 1956

Educ. 152. *Educational Statistics II* *2-3 credits*

The topics treated in this course include: regression, correlation, partial and multiple correlation, errors of measurement, sampling errors, methods of prediction. The application of these measures to experimental studies and routine studies will be an integral part of the course. Prerequisite: Educ. 151.

(On demand)

Educ. 153. *Mental Hygiene* *3 credits*

This course is designed to provide an understanding of the student and his adjustive behavior. Attention is given to factors that influence behavior, dynamics and motivation of behavior, varieties of adjustment and problems of reeducation. The selected illustrative material is of especial interest to the classroom teacher, supervisor and guidance counselor.

Spring 1957

Psych. 154. *Abnormal Psychology* *2 credits*

This course is intended to cover the broad field of abnormal psychology and to study the etiological and precipitating factors in the psychoses and neuroses. The approach used in the course is eclectic and the various classifications will be examined with the objective of synthesizing common thinking. Special attention will be paid to socio-cultural elements as factors in the development of mental and emotional disturbances.

Not offered 1956-1957

Educ. 155. *Introduction to Guidance* *3 credits*

An introduction to the activities and techniques of the guidance program in public schools. Principles and problems of guidance are discussed, varied methods of conducting guidance programs are considered, and texts and workbooks used in high school guidance programs are used in preparing sample guidance lessons. Required for guidance teacher and counselor certificate in Pennsylvania.

Spring 1957

Educ. 156. *Research in Occupational Information* *3 credits*

A survey of the fields of work as listed in the U. S. Census and Dictionary of Occupational Titles, considering the requirements for entrance, duties, income, possibilities of advancement, etc. Techniques of assembling and developing occupational materials are discussed, methods of presenting such material to

pupils are demonstrated. Each student will perform a number of job analyses, and will complete a project requiring knowledge of techniques of assembling occupational information. Required for guidance teacher and counselor certificate in Pennsylvania.
Not offered 1956-1957

Educ. 158. *Audio-Visual Aids in Education* *3 credits*
The State course of study is followed. Graphic materials and pictures that can be used in teaching are studied. Picture projection is studied as a regular classroom procedure and objective tests are constructed based upon educational films. Other visual aids stressed include school journeys, object-specimens, models, charts, graphs, diagrams, maps. Students taking the course for graduate credit will be required to complete successfully a prescribed project. This course is required for permanent certification in Pennsylvania. Laboratory fee $2.50.
Spring 1957

Psych. 159. *Contemporary Schools of Psychology* *2 credits*
A study of the history and development of the several schools of psychology: Structuralism, Functionalism, connectionism, Behaviorism, Gestalt, etc. Prerequisite: Educ. 270.
Not offered 1956-1957

GRADUATE COURSES

The following courses are open only to graduate students:

Phil. 200. *Survey of Scholastic Philosophy I* *2 credits*
A study of the nature of philosophical thought and its relation to the scientific mental outlook. The fundamental problems of philosophy will be reviewed in the background of a historical conspectus of ancient and medieval thought. Aristotelian Logic and Scholastic Metaphysics, Natural Theology and Philosophy of Nature will be evaluated as solutions to the perennial problems of being, God and nature.
Fall 1956

Phil. 201. *Survey of Scholastic Philosophy II* *2 credits*
This course, a continuation of Education 200, will view the philosophical problems pertaining to man in his constitution, development and moral life. A conspectus of modern and contemporary thought will be used as the concrete setting for the evaluation of the principles of Scholastic Psychology and Ethics. The course will conclude with an analysis of the problem of the validity of human thought stemming from Descartes and Kant and running up to contemporary agnosticism, atheism, and dialectical materialism. Prerequisite: Education 200.
Spring 1957

Educ. 202. *Educational Research* *2 credits*

An introduction to basic principles and major methods used in investigating educational problems. Attention is given to the significant steps involved in carrying out a research project. Required of all graduate students for the Master's degree.
Fall 1956

Educ. 203 & 204. *Advanced Educational Philosophy* *4 credits*

This course provides a philosophical consideration of the rights and duties of the child, the parent, the school, and society. The true aim of education in a democratic society is outlined, and the outstanding false and inadequate systems of education are examined and criticized. It presents and attempts the solution from a philosophical point of view of some of the problems touching curricula, organization, administration and methods of teaching. Required for the Master's degree.
Fall and Spring

Educ. 205. *Comparative Education* *2 credits*

The method of this course is both historical and philosophical. Consideration is given to the major characteristics of life, government and culture in western nations and to their effects upon the theory and practice of education. Attention is paid to the mutual interaction between these cultures and educational systems. The educational program of a democracy is compared and contrasted with those of the non-democratic nations. Prerequisite: Advanced Educational Philosophy.
Not offered 1956-1957

Educ. 206. *History of Secondary Education in the United States* *2 credits*

Topics considered in this course include: The grammar school of the seventeenth century, the academy of the eighteenth century, the modern high school, coeducation, manual training and vocational education. Other subjects treated are: the report of the Committee of Ten and the various studies for the reorganization of secondary education. Modern experiments, evaluative procedures and results are reviewed. The junior and senior high schools and the junior college movement are discussed.
Not offered 1956-1957

Educ. 207. *A History of the Problems of Education* *2 credits*

This course treats of some of the unsolved problems of education in historical perspective, especially those that concern the curriculum, educational psychology, methodology, administration, supervision and teacher education.
Spring 1957

Educ. 208. *Educational Measurement* *2 credits*

This course is a study of the principles involved in the construction, try-out and evaluation of achievement and intelligence tests. Consideration is afforded to central tendencies, variability, graphic methods, reliability and validity coefficients, item validity, scaled scores, test norms, variety and purposes of tests.
Fall 1956

Educ. 209. *Modern Trends in Teaching* *2 credits*

This course is designed for experienced teachers. After a discussion of traditional and current methods, study and opportunities for practice will be given in the subject-matter unit, the functional unit, and integration within and among subject areas. The New Pennsylvania program will receive special attention in order to improve coordination of the school and community.
Fall 1956

Educ. 210. *Secondary School Curriculum* *2 credits*

After a brief study of the principles of secondary education and of current problems in the field, consideration is given to methods of studying curriculum problems, the selection of subject matter in various fields, and principles of program construction. Special attention is given to the changing aims and purposes of the American secondary school and to current reorganizations, including work experience, vocational training and the junior college.
Not offered 1956-1957

Educ. 211. *Problems in Secondary Education* *2 credits*

This course is designed to aid the teacher in applying to secondary teaching the best principles of administration and organization in view of modern developments. Economy in the classroom, discipline, motivation, lesson-planning, supervised study, unit and project construction, teaching aids, examinations and evaluation procedures, records and reports will be the major topics treated.
Not offered 1956-1957

Educ. 213. *Student Activities* *2 credits*

This course concerns the place of student activities in the secondary school; their organization, stimulation and direction. Consideration is paid to the relationship of extra-class activities to the guidance program. Clubs, publications, assemblies, school councils, homerooms and athletic activities are studied.
Fall 1956

Educ. 214. *Advanced Educational Psychology* *2 credits*

A consideration of facts about the learning process derived from rational and experimental sources; a review of main theories of learning; application of learning principles to retention, practice, motivation, transfer, etc.
Spring 1957

Educ. 215. *Child Development* *2 credits*

A study of the growth and development of the child from infancy to late childhood. Motor, intellectual, emotional and social development of the child will be studied with emphasis upon guidance in home and school.
Not offered 1956-1957

Educ. 216. *Adolescent Development* *2 credits*

The development of physical, mental, moral and social traits of adolescence with special reference to their bearing upon problems of instruction in junior and senior high schools.
Not offered 1956-1957

Educ. 217. *Special Abilities Testing* *2 credits*

A survey of the most commonly used aptitude tests in the school guidance program. After a consideration of the theories of aptitude testing, test criteria, standardization, techniques of administration, scoring and interpretation, students will administer, score and interpret tests of intelligence, interest and special abilities. Each student will complete a project involving interpretation of test data in a guidance situation. Prerequisite: Education 208.
Fall 1956

Educ. 218. *Counseling Methods* *2 credits*

How the counselor works. Consideration of counseling methods including observation, rating scales, autobiography and techniques of interviewing. Attention is paid to problem areas in the secondary school, analysis of pertinent information with emphasis upon practical problems and their solution. Use of records as a counseling device. Prerequisite: Education 208.
Spring 1957

Educ. 219. *Development of School Guidance Programs* *2 credits*

An analysis of the techniques and problems involved in organizing and developing guidance programs with particular emphasis on secondary school guidance activities. Varied types of guidance systems will be discussed and adaptation of these to local needs will be considered in project assignments. Prerequisite: Education 155.
Not offered 1956-1957

Educ. 220, 221, 222, 223. *Thesis Seminar* *2 to 6 credits*

Designed for students who are now or will shortly be working on their theses. Registration is only with permission of the student's adviser. A candidate who does not complete the thesis in one seminar may be required to take one or two additional thesis seminars. Required for the M.A. degree.
Each semester

Phil. 250. *Ethics and Modern Social Problems* *2 credits*
This course studies the social nature of man in its moral implications. It will seek to establish the broad moral principles of social life in general and then to apply these principles in the areas of the three fundamental social units—the family, the state and the international community. This will entail discussion of such questions as the juridic origin of marriage, the right to educate, the occupational group, political rights and duties, social economy.
Not offered 1956-1957

Educ. 251. *Teaching of History and Social Science* *2 credits*
This course includes a consideration of the objectives of social studies, organizing the subject matter, textual and non-textual materials, the social studies curriculum, outcomes and their evaluation.
Spring 1957

Educ. 260. *Secondary School Management* *2 credits*
This course is designed for principals, department heads, supervisors and experienced teachers in secondary schools. It focuses attention on the principles and problems of democratic school management and improvement. It considers such techniques as analysis of classroom procedure, conferences, demonstrations, teachers' meetings and co-operation with the community. Students are encouraged to base class projects and papers upon problems from their own school systems. Prerequisites: Three or more years of teaching experience; Education 209; Education 210 or 211.
Spring 1957

Psych. 270. *Advanced General Psychology* *2 credits*
A comprehensive review of facts, principles and methods of experimental psychology basic to an understanding of the applied courses: child, adolescent, educational, mental hygiene and abnormal psychology, etc. Included are discussions of experimental findings on sensation, perception, nervous system, emotions, intelligence, memory.
Fall 1956

Educ. 271. *Measurement of Attainment* *2 credits*
A course devoted to the use of tests in guidance, counseling, pupil diagnosis, grading, class analysis, measuring learning efficiency, etc. There is also a treatment of appropriateness of selection of tests at certain grade levels, methods of administration, evaluation of achievement and marking systems. Prerequisite: Ed. 208.
Spring 1957

Educ. 272. *Measurement of Interest and Personality* *2 credits*
A course supplementary to Special Abilities Testing and Measurement of Attainment that considers the instruments commonly used in the school guid-

ance program to evaluate those aspects of interest and personality important in the counseling situation. Rating scales and questionnaires will be studied intensively with opportunity offered to the student to administer, score and interpret the results. Projective techniques will not be stressed in this course because of their specialized nature. Prerequisite: Ed. 208.
Not offered 1956-1957

Educ. 274 a, b. *Psychological Testing* *3 or 6 credits*
The principles of individual testing as applied to the Stanford Revision of the Binet or Wechsler-Bellevue Scales are discussed. Each student will be required to do a definite number of practice tests. Permission of the instructor is required.
Not offered 1956-1957

Educ. 275 a, b, c. *Counseling Practicum* *Variable credits*
Practice counseling with high school and college students under supervision. Time is devoted to class discussion and to the application of guidance principles in case conferences; provision is made for on-the-job training in using counseling techniques. Prerequisite: acceptable background and training. Admission only by the consent of the instructor.
Fall and Spring

DEPARTMENT OF ENGINEERING

Mr. Plonsky, *Chairman*; Mr. Rist

The objective of the Engineering Department is to introduce the student into the highly technical training necessary for all phases of the Engineering Profession.

Engin. 5. *Perspective Drawing* *3 credits*
The development of the elements of descriptive geometry into a detailed study of the various methods used in making a mechanical perspective drawing. Also professional short-cuts, casting of shades and shadows and mirror reflections used in mechanical drawing are presented. Prerequisite: Engin. 13.
Not offered 1956-1957

Engin. 6. *Principles of Home Construction* *3 credits*
The study of housing from primitive to the present. Particular emphasis is placed on practical aspects such as how to gauge value in a building and what constitutes good construction. Various methods of heating are examined; plumbing and electrical requirements are analyzed. Examples of orientation, (the placing of the room with respect to the sun), are presented. The effective employment of color is studied.
Not offered 1956-1957

Engin. 7. *Architectural Drawing* *3 credits*

A practical introductory course emphasizing the technical elements of architectural drafting. Basic room plan layouts are presented with detailed study of carpentry, masonry, doors and windows. Stress is laid upon correct architectural technique, symbols of lettering used in plan layouts.
Not offered 1956-1957

Engin. 8. *Architectural Drawing* *3 credits*

An advanced course consisting of the study, with detailed drawings of stairs, fireplaces, walls, glass brick, insulation, heating, plumbing and electrical wiring. A complete set of plans incorporating these various parts concludes the course. Prerequisite: Engin. 7.
Not offered 1956-1957

Engin. 9. *General Drafting* *4 credits*

Freehand and mechanical lettering, use of drafting instruments, applied geometry, orthographic projection, auxiliary views, sectional views, isometric views, oblique views, dimensioning, elements of structural drawing, piping and welding drawing, elements of architectural drawing with details of walls and kitchen assembly, heating and plumbing layouts, map and topographic drawing with profiles, pencil and ink tracings.
Fall 1956

Engin. 13. *Mechanical Drawing* *3 credits*

The use of drawing instruments is applied to the drawing of orthographic views of objects, isometric and oblique drawings, sectional views, conventional and semi-conventional representation of screw threads, auxiliary views, tracings on tracing paper and tracing cloth. Freehand sketching of objects in orthographic projection and isometric view is also presented. Use of proper conventional mechanical lines as well as the art of good lettering is stressed in all plates. 6 hours drafting room practice and 1 hour lecture.
Fall 1956

Engin. 21. *Engineering Mechanics—Statics* *4 credits*

This course is devoted to the study and analysis of various types of force systems: resultants and conditions of equilibrium; stress analysis of the parts of different types of structures by graphical and analytical methods; frictional forces; centroids and moments of inertia of areas and solids. Prerequisite: Physics 18; Corequisite: Math. 21.
Fall 1956

Engin. 22. *Engineering Mechanics—Dynamics* *4 credits*

Kinematics of particles and rigid bodies which includes linear, curvilinear, angular and relative motions; inertia forces, impulse momentum, work, energy

and power considerations of mechanics; mechanical vibrations. This course is designed for both engineering and physics students. Prerequisite: Engin. 21; Corequisite: Math. 22.
Spring 1957

Engin. 23. *Plane Surveying* *3 credits*
The student will be given the opportunity to familiarize himself with the Dumpy and Wye levels, several makes of transits, their use, care and adjustment. The field work will include of the following: Running of closed and open traverses, determination of the azimuth of a course by solar observation, stadia shots for "topo" and location data, bench mark and profile leveling, staking out of simple curves. In addition to the theory implied with the foregoing, the following points will be considered: calculation of areas by co-ordinates, DMD, and planimeter; calculation of a vertical curve; plotting of a map from a deed; earthwork calculations. 1½ hours Lec. and Rec. 4½ hours field work. Prerequisite: Math. 13.
Fall 1956

Engin. 24. *Descriptive Geometry* *3 credits*
The geometric method of projection of points, lines and planes and the application of these methods to graphical solution of engineering problems involving lines, planes and solids; truncations and intersections of solids leading to the development of surfaces and traces of perspective views. The rules of drafting room practices are continued regarding lettering and conventional lines. One hour lecture, six hours drafting room practice. Prerequisite: Engin. 13.
Spring 1957

Engin. 25. *Engineering Materials* *3 credits*
This course is designed to acquaint the student with the materials that are used in engineering construction and fabrication; their source, manufacture, properties, methods of testing, uses and limitations. The subject includes not only metals but also cementing materials, wood, rubber, glass, plastics, corrosion and protective coverings. Prerequisite: Chem. 2.
Fall 1956

Engin. 26. *Surveying* *4 credits*
Four hours of lecture recitation and computation per week will include basic surveying, review of the required mathematics, triangulation, volume measurements, reduction of field notes to diagrams, general earth moving computation, simple curves, vertical curves, compound curves, use of courthouse deed descriptions for location data. Six hours of field work will include familiarization, use, care and adjustment of the Dumpy and Wye levels, several makes of transits and their accessories. Simple stake-out, the differential and reciprocal methods of leveling, the stadia method of measuring distances, the staking-out of highway curves as well as the location of bridges, buildings, underground and overhead utilities lines, building site survey and stake from deed descrip-

tion. In addition the tangent method of plotting a traverse including contour lines and other pertinent information necessary for the completion of a map will be considered.
Spring 1957

Engin. 31. *Engineering Electricity* *4 credits*
A treatment of fundamental principles of direct current and magnetic circuits and the application of these principles to the theory and performance of direct-current machinery which includes not only motors and generators but also the associated control apparatus and measuring equipment. Classroom instruction is supplemented by experimental work in the electrical machinery laboratory. Corequisite: Physics 20.
Not offered 1956-1957

Engin. 32. *Engineering Electricity* *4 credits*
A treatment of fundamental principles of alternating current circuits, including three phase circuits, and the application of these principles to the theory and performance of alternating current machinery such as generators, motors, transformers, rectifiers, measuring instruments. An introduction to electronic tubes and circuits is also presented with basic applications in rectifiers, amplifiers, oscillators. Classroom instruction is supplemented by experimental work in the electrical engineering laboratory. Prerequisite: Physics 20.
Not offered 1956-1957

Engin. 101. *Elements of Electrical Engineering* *4 credits*
The application of the principles of electric and magnetic circuits to the theory and performance of electrical machinery such as direct-current generators and motors, alternating-current single-phase and three-phase generators and motors, control circuits, transformers, electrical measuring instruments. Classroom instruction is supplemented by experimental work in the electrical machinery laboratory wherein the student is familiarized with the techniques of operating and of obtaining characteristics of electrical machinery. This course is designed for Electronic Majors. Prerequisite: Physics 104.
Spring 1957

DEPARTMENT OF ENGLISH

Fr. Grady, S.J., *Chairman*; Mr. Cullather, Mr. Driscoll, Mr. Holden, Mr. Moran, Mr. O'Gorman, Mr. O'Rourke, Fr. Quinn

The aim of the Department of English is to furnish the student with a balanced course in English which will realize the objectives of a liberal arts college. The course is planned to train the student to read, write and speak English as effectively as possible and encourage him to appreciate more deeply the artistic creations of the English language. All candidates for the degree will be required to take courses 1-2, 3-4, and 23-24. The remaining courses are offered as electives for those who have satisfied the requirements of the basic courses.

Engl. 1 & 2. *College Composition and Introduction to Literature* *6 credits*

This course is designed to increase the college student's mastery of the techniques of communication in English. The principles of literary structure: unity, coherence, emphasis. The qualities of style: clarity, force, interest. Development and arrangement of ideas in the informal essay. Narration and description. The nature, elements and types of Poetry: principles of versification. Appreciation of lyric poetry.

(N.B.: A program of required reading is integrated with and supplements lectures and discussions, with required exercises.)

Fall and Spring

Engl. 3 & 4. *Public Speaking* *2 credits*

The principles of oral expression; enunciation, pronunciation, emphasis, interpretation; together with the elements of argumentation, the preparation and presentation of formal and informal speeches.

Fall and Spring

Engl. 23 & 24. *Oratory and Dramatic Literature* *6 credits*

A study of the more formal types of literary composition, this course emphasizes the structure and development of the prepared oration—the invention, disposition and expression of arguments, and oratorical style—during the first semester. The second semester is devoted principally to a study of the structure of the drama. Lectures, discussions and required exercises, together with required program of supplementary reading.

Fall and Spring

Engl. 101. *British Literature of the XVIIth Century* *3 credits*

A critical and appreciative study of the literary work of the writers of the Jacobean and Restoration period, including Donne, Crashaw, Herrick, Sir Thomas Browne, Jeremy Taylor, Bunyan and Milton.

Fall 1956

Engl. 102. *British Literature of the XVIIIth Century* *3 credits*

A critical and appreciative study of the writers of the Neo-classical period, including Samuel Johnson, Goldsmith, Burke, Walpole, Boswell, Pope, Swift, Sheridan, Addison and Steele, Gray, Thomson, Cowper and Blake.

Spring 1957

Engl. 103. *British Literature of the XIXth Century, (a) The Romantic Period* *3 credits*

A critical and appreciative study of the writers of the "Age of Romanticism" in British Letters: Wordsworth, Coleridge, Shelley, Keats, Byron, Scott, DeQuincey, Charles and Mary Lamb, Landor, Leigh Hunt.

Not offered 1956-1957

Engl. 104. *British Literature of the XIXth Century, (b) The Victorian Era* *3 credits*

A critical and appreciative study of the writers of the Victorian period, including Tennyson, the Brownings, the Brontes, Carlyle, Newman, Macaulay, Thackeray, Dickens, Matthew Arnold, Ruskin, Swinburne.
Not offered 1956-1957

Engl. 105. *American Literature to 1900* *3 credits*

A survey of the development of the body of distinctively American Letters through the XVIIIth and XIXth centuries, with special emphasis on Hawthorne, Irving, Cooper, Melville, Whitman and the Concord Poets.
Fall 1956

Engl. 106. *American Literature after 1900* *3 credits*

A survey of the maturer and more nationally conscious American Literature which emerged after the World War I, particularly in the works of Wolfe, Hemingway, Cather, O'Neil, Frost, Robinson, Faulkner, Sinclair Lewis, et al.
Spring 1957

Engl. 107. *The Novel in English: (a) Chaucer to Scott* *3 credits*

A study of the development of the novel form in the English language, British and American, from Chaucer to Scott.
Fall 1956

Engl. 108. *The Novel in English: (b) Dickens to the Present* *3 credits*

A study of the major novelists, British and American, from Dickens to the present, with attention to the evolution of the novel as a social commentary.
Spring 1957

Engl. 109. *The Forms of Drama: (a) Aeschylus to Ben Johnson* *3 credits*

A study of the development of dramatic forms from the Greek classic through the miracle and morality play to the fluid plays of the Elizabethan era.
Not offered 1956-1957

Engl. 110. *The Forms of Drama: (b) Sheridan to Shaw* *3 credits*

A study of the dramatic forms that developed after the Elizabethan period, emphasizing the development of the "problem play" after Ibsen, and the growing attempts to "break through the proscenium" and widen stage horizons.
Not offered 1956-1957

Engl. 111. *Shakespeare: Tragedies* *3 credits*
A critical and apppreciative study of five major tragedies and of five of the principal chronicle plays.
Fall 1956

Engl. 112. *Shakespeare: Comedies* *3 credits*
Critical and appreciative study of the major comedies and of the comic sequences in the chronicle plays.
Spring 1957

Engl. 113. *Medieval English Literature, 1000-1400* *3 credits*
A study of the historical, social and literary background with emphasis on the works of Chaucer. (For selected advanced students majoring in English).
Not offered 1956-1957

Engl. 114. *Principles of Literary Criticism* *3 credits*
A study of the theory of literary criticism and the principles of literary aesthetics, from Aristotle and Longinus to the present.
Not offered 1956-1957

Engl. 115. *Journalism* *3 credits*
A survey of the history and development of modern journalism; journalistic terminology; newspaper writing; publicity, advertising copy, news-reporting, feature and editorial writing. Newspaper and magazine editorial organization. Headline writing.
Fall 1956

Engl. 116. *Journalism* *3 credits*
The preparation of news-copy; editing copy for publication; preparation of feature and special articles; editorials and editorial policies; newspaper and magazine layout. Prerequisite: English 115
Spring 1957

Engl. 117. *Creative Writing Seminar* *3 credits*
Group conferences and discussions of the techniques of writing for publication: fiction, poetry, playwriting, biography. Critical discussion of work of seminar members. For selected advanced students only, who have shown superior ability in creative expression.
Not offered 1956-1957

Engl. 120. *Critical Approaches to the Communication Arts* *3 credits*
A discussion of the philosophical basis for critical appreciation of modern literature and the media in which it is presented: publishing, motion pictures,

radio and television; and an evalution of the criticism of these media as presented in professional literary magazines and reviews. Use is made of recordings of plays, music; and of attendance at selected theatrical presentations and concerts, radio performances.
Not offered 1956-1957

Engl. 121. *Contemporary Poetry* *3 credits*

A survey and study of major contemporary poets, including T. S. Eliot, Auden, Spender, Macleish, Aiken.
Not offered 1956-1957

DEPARTMENT OF HISTORY AND POLITICS

Mr. Brown, *Chairman*; Fr. Gallagher, S.J., Dr. Gannon,
Mr. Langan, Mr. Scully

The Department Aims: (1) To contribute to the culture and development of the students; (2) to encourage the student to approach the subject along the lines of solid historical methodology in his investigation, determination and reconstruction of data; (3) to present history as the study of human activities and concrete events which have social significance; (4) to demonstrate that the content constitutes a body of knowledge the parts of which are interdependent because of causal relations; (5) to bring to the student an intelligent and critically sympathetic understanding of his own and other people's civilization and culture. The Department does not aim to make specialists; rather it aims to give a comprehensive understanding of basic historical trends.

Prerequisites: For the History major History 1-2, 3-4, plus eighteen credit hours from upper division courses for a total of thirty credit hours. The Department strongly recommends History 103-104, 108-109, 114-115, and 107 or 119 as the courses best designed to give the student that comprehensiveness of understanding which constitutes one of the major aims of the Department.

Hist. 1 & 2. *Political and Social History of the United States* *6 credits*

A fundamental study of the history of the United States from the time of its European beginnings to the present, with special emphasis on the history of Pennsylvania. The first semester will analyze the period from our colonial origins to the end of the Civil War. The second semester will deal with the period of Reconstruction to our own times. Required of all students for any degree from the University. This course also meets the requirements of the State for public school teaching.
Fall and Spring

Hist. 3 & 4. *History of Modern Europe, 1500 to the Present* *6 credits*

A fundamental study of European history with main concentration upon the political aspects of European development. First semester: from the period of the rise of national monarchies to the Congress of Vienna. Second semester: from 1815 to the present. Continued emphasis will be placed on political developments but the significance of industrialism, the new nationalism and liberalism will be noted.

Fall and Spring

Hist. 103 & 104. *Development of American Civilization* *6 credits*

An analysis of leading economic, social and cultural aspects of American life. First semester: study of the economic, religious and intellectual bases of colonial American life; impact of the Revolution; development of town and country life; sectional differences; the first factories and labor movements; growth of democracy and the reform movements. Second semester: study of the leading economic, social and cultural factors which shaped modern life and institutions since 1865. Among the topics treated are the growth of industry, agriculture and the agrarian discontent; the disappearance of the frontier; labor and immigration; sport, literature and the arts; religious tendencies; diffusion of knowledge.

Fall and Spring

Hist. 105. *The United States in the Twentieth Century* *3 credits*

An intensive study of American development from 1900 to the present. Stress will be placed on the Roosevelt Era and its Progressivism, Wilson's New Freedom, diplomacy of the first World War, the return to "normalcy," the Great Depression and the New Deal, Roosevelt and world politics, and origins and consequences of World War II.

Fall 1956

Hist. 106. *History of Pennsylvania* *3 credits*

A study of the political, economic and social factors in the history of the commonwealth from colonial times to the present.

Spring 1957

Hist. 107. *Co-ordinating Seminar in American History* *3 credits*

Intensive readings and reports on selected problems in American history. In all discussions an attempt will be made to integrate information in such terms as will give a unified picture of American life and institutions. Open only to Seniors working in History or by special permission from the Chairman of the Department. Normally History 1 & 2 and twelve additional credits from courses 120 to 126 and from co-related program course numbers 120 to 126 inclusive will be prerequisites.

Fall 1956

Hist. 108 & 109. *Development of Contemporary Civilization in Western Europe* *6 credits*

An analysis of the major economic, social and cultural aspects of European life since 1500. First semester: impact of the Protestant Revolution on European society; decline of medieval religious and economic unity; commercialism and the bourgeoisie; the intellectual revolution; antecedents of the French Revolution. Second semester: liberalism and reactions; fruits of the industrial revolution; march of the new sciences; socialism and communism; nationalism and imperialism; the twentieth century inheritance.
Not offered 1956-1957

Hist. 110. *French Revolution and Napoleonic Era* *3 credits*

First quarter: historical antecedents of the Revolution; the Philosophies; republicanism and the fall of the monarchy; Reign of Terror; France and Europe; the Directory. Second quarter: rise of Napoleon; the Consulate; internal achievements; intervention in Europe; significance of the Spanish and Russian campaigns; War of Liberation; Waterloo. Critical assessment of the period in the light of modern trends.
Not offered 1956-1957

Hist. 111. *Europe in the Nineteenth Century* *3 credits*

The Congress of Vienna and the European restoration; the rise of national sentiment and its expression in revolutions; the Industrial Revolution and its social, political and colonial consequences. The unification of Italy and Germany; Russia; Mediterranean politics and the Eastern Question; international alliances and rivalries.
Not offered 1956-1957

Hist. 114 & 115. *Medieval History* *6 credits*

A survey of medieval political and religious institutions. First semester: the origins and diffusion of Christianity; the contribution of imperial Rome; the emergence of political authority after the invasion and settlement of the barbarians; the spread of learning under monastic influence; the role of the Papacy; the achievements of the Crusades. Second semester: Decline of the Eastern Empire; the Holy Roman Empire; the Church in the period of Innocent III, the Renaissance of the twelfth and thirteenth centuries; the decline of medieval Europe before the secularization of thought in the field of politics, economics and religion.
Not offered 1956-1957

Hist. 116. *Renaissance and Reformation* *3 credits*

An intensive study of Europe from the fourteenth to the middle of the seventeenth century. First quarter: study of humanism, the new wealth and the bourgeoisie; breakdown of medieval unity. Second quarter: the causes of the

Protestant Revolution; Luther, Henry VIII, Calvin. The Catholic Reformation, religious wars, Peace of Westphalia.
Not offered 1956-1957

Hist. 119. *Co-ordinating Seminar in European History* *3 credits*
Open only to Seniors working in History or by special permission from the Chairman of the Department. Intensive readings and reports on selected problems in European History. In all discussions an attempt will be made to integrate information in such terms as will give a unified picture of European institutions and their development. Normally History 3 & 4 and twelve additional credits from courses History 108-118 and co-related courses numbered 127 to 132 inclusive will be required for admission.
Not offered 1956-1957

POLITICAL SCIENCE

For the Political Science major the Department aims to accomplish the following objectives: (1) to give the student a thorough understanding of the nature and purposes of civil society; (2) to impart a sound knowledge of the philosophical basis of democracy; (3) to enable him to appreciate the problems of his own government at work and (4) to relate the American system to the governments of other states in the international community.

The aim is not to make specialists but to assist in the acquisition of a sound core of fundamental knowledge upon which can be built the basis of both good citizenship and good scholarship

Pol. Sci. 101 & 102. *American National Government* *6 credits*
The course will begin with a philosophical analysis of such basic terms as society, state, authority and common good. Forms of government will be contrasted and evaluated. The structure, operations and functions of the three branches of the national government will then be studied.
Fall and Spring

Pol. Sci. 105. *State Government* *3 credits*
A general survey of the natural constitutional position of the states and the changing federal-state relationships will precede the detailed analysis of state governments in actual operation. Emphasis will be placed on Pennsylvania and actual problems of procedure and policy will be used to illustrate general trends in state governments.
Not offered 1956-1957

Pol. Sci. 106. *Local Government* *3 credits*
Types of local government, evolution of the American township, county, borough and city from English prototypes; participation in local government and politics as a training school for democracy; constitutional and statutory limitations on local governments; efforts to preserve "home rule"; functions of local

officials; budget, personnel, local taxation and assessment, purchasing, indebtedness, suggestions for improvement in structure and operation of local governments, especially those of Pennsylvania.
Not offered 1956-1957

Pol. Sci. 107. *Public Administration* *3 credits*
Nature of public administration; structures and limitations imposed through legislative statutes and apppropriations; staff organization and flow of command; employment policies, personnel training and management; employee organization; public relations.
Fall 1956

Pol. Sci. 108. *Political Science* *3 credits*
A survey of the variety of functions, forms and mechanisms of civil societies at all levels in their economic, cultural, and historical settings with a view to deriving generalizations helpful toward directing the state and its subsidiaries in the most appropriate and efficient manner toward their appointed ends.
Spring 1957

THE CO-RELATED PROGRAM

The following courses are specifically designed to integrate the History and Political Science core programs and may be taken for credit toward the major and minor in either field of concentration.

Hist. 120 & 121. *American Diplomatic History* *6 credits*
First semester: survey of the origins and development and functions of the State Department and its relation to other policy-forming agencies of the federal government. Diplomatic activities prior to 1789; the Louisiana Purchase; War of 1812; the Monroe Doctrine; Manifest Destiny. Second semester: Pan-Americanism, Cuba and the Caribbean, World War I; problems in the inter-bellum period; today's challenges and attempted solutions. United Nations Organization.
Not offered 1956-1957

Hist. 122 & 123. *American Constitutional and Legal History* *6 credits*
First semester: the historical background of the federal constitution; legal disputes and theories of colonial and revolutionary periods; the nature of the Constitution and its interpretation by Marshall and Taney. Second semester: constitutional problems occasioned by the Civil War; the new amendments; the expansion of federal powers. State constitutions, powers and activities in relation to the federal constitution. Key cases will be analyzed in detail and set in their proper historical perspective.
Not offered 1956-1957

Hist. 124 & 125. *History of American Political and Social Thought* *6 credits*

An inquiry into the major philosophies which helped shape our institutions. First semester: Puritan concepts of liberty, property, and representation; views of the Independents; pre-Revolutionary society and thought and the growing adherence to the notion of independence; the Constitution as it represents a compromise between the conservative and liberal traditions; Jeffersonian and Jacksonian democracy; social, economic, and political ramifications of the slavery question. Second semester: triumph of the nationalist view and its implications; recent tendencies; the problem of liberty in the complex, highly technical American society.
Not offered 1956-1957

Pol. Sci. 126. *The Political Parties of the United States* *3 credits*

An analysis of the origins, nature and functions of parties under our American system of government; the English tradition of the party system; differences between the English and American concepts. Jeffersonianism versus Hamiltonianism; sectionalism and pressure groups; splits in party organization prior to the Civil War; impact of the new industrial order on political alignments; the role of third parties in the United States; current stresses and strains on both major party organizations.
Spring 1957

GRADUATE COURSES IN HISTORY

Hist. 200. *Major Trends in American Historiography* *2 credits*

Special consideration will be given to those American historians who typify the strictly "political" approach to history and to the writers who best illustrate the break from that tradition.
Not offered 1956-1957

Hist. 202. *Contemporary Problems of American Foreign Policy* *2 credits*

Problems will be selected which illustrate the processes of adjusting a national policy differences through diplomatic and organizational means. The problem of security will receive special attention.
Not offered 1956-1957

Hist. 204. *Party Government in the United States* *2 credits*

A historical survey of the rise of the American party system will serve as an introduction for a detailed analysis of the nature, composition and organization of parties and pressure groups in the United States.
Not offered 1956-1957

Hist. 206. *The United States in the Twentieth Century* *2 credits*
An intensive study of American development from 1900 to the present. Stress will be placed on the Roosevelt Era and its Progressivism, Wilson's New Freedom, diplomacy of the first World War, the return to "normalcy," the Great Depression and the New Deal, Roosevelt and world politics, and origins and consequences of World War II.
Not offered 1956-1957

Hist. 208 & 209. *History of American Political Thought* *4 credits*
First semester: European influences on colonial American philosophy; controversy occasioned by the Revolution of 1776; Hamiltonian and Jeffersonian ideals at work; philosophical implication of the secessionist and slave controversies. Second semester: Triumph of the nationalist view; Social Darwinism and the American economy; twentieth century issues.
Fall and Spring

Hist. 210 & 211. *American Constitutional History* *4 credits*
First semester: Emphasis will be placed on the bases of American constitutionalism, the Federal Convention, development of the judicial process, states rights, nationalism; constitutional issues which led to the Civil War.
Second semester: Study of the fourteenth amendment will initiate the second phase of this course. The impact of the new industrial capitalism on constitutional development will be thoroughly analyzed. Problems of imperialism, Federal centralization and civil rights will also be treated.
Not offered 1956-1957

Hist. 212 & 213. *Social and Literary Record of the United States Since 1865* *4 credits*
Major writers will be studied in the light of their influence on American social philosophy and practices.
Not offered 1956-1957

Hist. 214. *Problems in the History of American Foreign Policy, 1775-1861* *2 credits*
A detailed survey of the diplomatic problems of the United States before the Civil War. Emphasis will be placed on the factors of security and expansion as manifested in the Diplomacy of the American Revolution, Federalist Foreign Policy, the Louisiana Purchase, the War of 1812, the Monroe Doctrine, the Texas controversy and the boundary disputes with Great Britain.
Fall 1956

Hist. 215. *Problems in the History of American Foreign Policy 1861-1921* *2 credits*
An analysis of the diplomatic problems of the later decades of the nineteenth century will serve as an introduction to policy of the United States as a World

Power. Particular attention will be given to the diplomatic aspects of the Civil War, the extension of the Monroe Doctrine, the influence of domestic politics in foreign relations, the Venezuelan Boundary Dispute, the Spanish-American War, the Open Door in the Far East and the diplomacy of World War I.
Spring 1957

Hist. 216. *Development of American Civilization* *2 credits*

The leading economic, social and cultural factors which shaped modern life and institution since 1865.
Not offered 1956-1957

Hist. 217. *Colonial America to 1783* *2 credits*

European beginnings—the English settlements; colonial society and politics; the struggle for the Mississippi Valley; the War of Independence.
Not offered 1956-1957

Hist. 218. *The Civil War Period and Reconstruction, 1852-1876* *2 credits*

An analysis of the social, economic and political conditions that resulted in the struggle for Southern independence; the war years in the North and South. The postwar era to the election of 1876.
Not offered 1956-1957

Hist. 219. *Political and Social History of the United States, 1789-1828* *2 credits*

First Semester: The course covers the political, economic and social history of the United States from 1789 to 1828.
Not offered 1956-1957

Hist. 220. *Political and Social History of the United States, 1828-1865* *2 credits*

Second Semester: The impact of Jacksonian democracy on American life, the impulse toward territorial expansion and the sharpening of regional clashes will receive special consideration.
Not offered 1956-1957

Hist. 221. *Contemporary European Problems I* *2 credits*

An analytical treatment of the political, economic and social problems of Europe, especially Western Europe since 1920. Topics are treated partly on a group basis and partly on an individual country basis.
Not offered 1956-1957

Hist. 222. *Contemporary European Problems II* *2 credits*

During the second semester special attention will be focused on the efforts to create an economically and politically viable European Union and to develop adequate defenses to counteract the Russian threat.
Not offered 1956-1957

Hist. 223. *American Political History from 1865 to 1900* *2 credits*

The leading events and forces of both domestic and foreign relations from Andrew Johnson to Theodore Roosevelt with attention to economic and social changes as they affected politics. Broad use is made of the literature of the subject.
Not offered 1956-1957

DEPARTMENT OF MATHEMATICS

Mr. Bartley, *Chairman*; Fr. Casey, S.J., Mr. Duffy, Dr. Harper, Mr. Rist, Mr. Savulis, Mr. Schumann

The Department of Mathematics instructs students who are pursuing different courses of study and recognizes that the instruction must be adapted as much as possible to the needs of these students. For the Arts and Social Science students the objectives of the Department are: (a) to train the students in the basic and necessary skills of mathematics which will be required in nontechnical pursuits; (b) to bring out the cultural and applied values of mathematics; and (c) to show the dependence of other branches of knowledge on mathematics. In addition in the instruction of engineering and science students for whom mathematics is a tool subject the objectives of the Department are: (a) to develop skill and accuracy in mathematical operations; and (b) to familiarize the students with the methods of mathematical analysis. Finally for those students who show special aptitude for mathematics it is the objective of the Department to prepare them to pursue advanced work in this field.

Math. 7 & 8. *Mathematics Survey* *6 credits*

A course particularly designed for the students who do not expect to take mathematics beyond the first year. The aim of the course is to present the major ideas in the development of mathematics from ancient to modern times. Suitable application of these ideas to the physical and social sciences is indicated throughout the course. The importance of mathematical concepts for, and their relation to Logic, Philosophy, Art, the natural and social sciences and the history of civilization are discussed. Its primary objective is to emphasize fundamental ideas of the science and to furnish a foundation for an appreciation of its wider significance.
Fall and Spring

Math. 11. *Algebra and Trigonometry* *3 credits*

An intensified course covering the topics of simultaneous equations, quadratic and higher order equations, complex quantities, exponents, logarithms; trigonometric functions, solutions of triangles, trigonometric laws. Three hours lecture and recitation.
Fall 1956

Math. 12. *Trigonometry and Analytic Geometry* *3 credits*

A continuation of Mathematics 11 covering the topics of trigonometric identities and equations, inverse trigonometric functions; loci, straight lines, circles, ellipses and other conics; solid analytic geometry. Three hours lecture and recitation. Prerequisite: Math. 11.
Spring 1957

Math. 13. *Engineering Mathematics* *4 credits*

An intensified mathematics course for engineering students covering the topics of simultaneous equations, quadratic and higher order equations, complex quantities, exponents, logarithms; trigonometric functions, solutions of triangles, trigonometric laws, identities and equations, and inverse trigonometric functions. Four hours lecture and recitation.
Fall 1956

Math. 14. *Engineering Mathematics* *4 credits*

This course for engineering students covers the subject of Analytic Geometry and leads into Calculus. The subject matter includes: loci, straight lines, circles, ellipses and other conics; solid Analytic Geometry; and introductory treatment of the processes of differentiation and integration. Four hours lecture and recitation. Prerequisite: Math. 13.
Fall and Spring

Math. 21. *Differential Calculus* *4 credits*

Variables and functions; limits; differentiation; rates: applications of derivatives to geometrical and physical problems involving maxima and minima; differentials and a brief introduction to the process of integration; Rolle's theorem and the theorem of the mean; indeterminate forms; elementary treatment of partial derivatives and transformation of variables. Prerequisite: Math. 12, or equivalent.
Fall and Spring

Math. 22. *Integral Calculus* *4 credits*

Integration as the inverse of differentiation; the definite integral; integration as a process of summation; approximate evaluation of integrals; integration by parts and other methods; reduction formulas; partial differentiation; total differentials and their geometrical interpretation; multiple integrals; use of integrals in the evaluation of areas, arc lengths, volumes, surfaces, fluid pres-

sures, work, centroids and moments of inertia; infinite series and the approximate evaluation of functions by series. Prerequisite: Math. 21.
Fall and Spring

Math. 101. *Differential Equations* *4 credits*
A treatment of ordinary differential equations. First order, first and higher degree differential equations; special solutions; linear equations with constant coefficients and with variable coefficients; total differential equations; operator methods; approximate solutions; applications of differential equations to geometrical and physical problems; series solutions. For Mathematics, Physics and other science students. Prerequisite: Math. 22.
Fall and Spring

Math. 102. *Vector and Tensor Analysis* *3 credits*
The theory of vectors and their applications to the solution of mathematical and physical problems. Linear vector functions, and matrix applications. Elements of the theory of tensors. Prerequisite: Math. 101.
Spring 1957

Math. 103. *Advanced Differential Equations* *3 credits*
This course includes the treatment of special differential equations and partial differential equations and their applications. Non-linear differential equations; linear partial differential equations of first and higher order; non-linear partial differential equations of first and second order. Recommended for Physics and Mathematics majors. Prerequisite: Math. 101.
Not offered 1956-1957

Math. 104. *Introduction to Statistical Analysis* *3 credits*
Curve plotting; frequency curves, averages, measures of dispersion, theory of correlation. Applications to the natural and social sciences. Prerequisite: Math. 22.
Not offered 1956-1957

Math. 105. *History of Mathematics* *3 credits*
Treats of the development of Mathematics from earliest times through the Calculus. Prerequisite: Math. 22.
Offered on request

Math. 106. *Advanced Calculus* *3 credits*
A critical study of the foundations of differential and integral Calculus; further study of the mean value theorem; series; representation of various functions in terms of power series; partial and directional derivatives of functions of several variables; space integrals, Green's and Stoke's theorems; elementary treatment of functions of a complex variable. For Physics and Mathematics majors. Prerequisites: Math. 22, Math. 101.
Fall 1956

Math. 107. *Advanced Calculus* *3 credits*

An introductory treatment of special types of series and integrals including elliptic integrals, Fourier series and functions, Gamma and Beta functions, Bessel functions, and further treatment of functions of a complex variable. Recommended for Physics and Mathematics majors. Prerequisite: Math. 106.
Spring 1957

Math. 108. *Modern Algebra* *3 credits*

An introduction to some of the simpler algebraic concepts. The number system and elementary theory of numbers. Groups, rings, polynomials over a field, matrices and determinants. Prerequisite: Math. 22.
Not offered 1956-1957

Math. 109. *Theory of Equations* *3 credits*

An introduction to the theory of solution of various equations. In addition the course tends to introduce the student to many of the concepts of modern algebra. Theory of determinants and matrices is applied early in the course. Prerequisite: Math. 22.
Fall 1956

Math. 110. *Selected Topics in Advanced Mathematics* *3 credits*

This course is designed particularly for the electronics majors. Laplace transforms applied to the solution of differential equations; power series; Fourier series; Bessel functions; functions of a complex variable; vectors; vector methods. Prerequisite: Math. 101.
Spring 1957

Math. 115. *Undergraduate Mathematics Thesis* *Variable credit*

For those who apply for the B.S. Degree with a major in mathematics. To evaluate the student's ability to carry out the investigation of a specific mathematical topic. The credit value will be one or two credits depending upon the results accomplished and time involved. Prerequisite: 24 credits in mathematics.
Spring 1957

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

Lt. Col. Wesley A. Keyson, *Chairman*; Capt. Victor B. G. Finley,
Major Albert Leister, and military staff

The ROTC instruction is divided into a Basic Course (Freshman and Sophomore years) for which eight academic credits are allowed, and an Advanced Course (Junior and Senior years) for which twelve academic credits are allowed. The enrollment in each course is for a period of two years. Having enrolled in a course a student is required to complete that course as a

prerequisite for graduation, unless he is excused from the requirement by authority of the Secretary of the Army. The primary objective of the ROTC system of education is to qualify selected students to be commissioned reserve officers in the Army of the United States. The secondary objective of the course is to teach the student the fundamentals of intelligent citizenship and be given such general basic military training as well as benefit him and the service when he becomes a member thereof and finally to afford him a means for practical training in organization, leadership and discipline which will be of value to him in a military or commercial career.

Enrollment in the Advanced Course is limited to students who have successfully completed the Basic Course, or are veterans of the Armed Forces, and are selected for continuance in the ROTC by the President of the University, upon recommendation of the Professor of Military Science and Tactics. Officer type uniforms and all military textbooks are supplied without cost to all students. In addition, each advanced student receives a monthly monetary allowance based on daily commutation of subsistence allowance at 90 cents a day. Advanced course students (only) are required to attend a six weeks summer camp at the end of their Junior year in college.

M. S. 1 & 2. *First Year Basic, General Military Science* *4 credits*

Introduction to military science; military organization, history of the ROTC; American military history, colonial to present; individual weapons and marksmanship; school of the soldier and exercise of command. 2 hours lecture, 1 hour drill each semester.
Fall and Spring

M. S. 3 & 4. *Second Year Basic, General Military Science* *4 credits*

A comprehensive study of crew-served weapons and related gunnery; map and aerial photograph reading; school of the soldier and exercise of command. Prerequisite: MS 1 and 2, or equivalent advanced standing. 2 hours lecture and 1 hour drill each semester.
Fall and Spring

M. S. 5 & 6. *First Year Advanced, General Military Science* *6 credits*

A comprehensive study of small unit tactics and communication, organization, function and mission of all arms and services; military teaching methods; leadership; school of the soldier and exercise of command. Prerequisite: MS 1 and 2, 3 and 4, or equivalent advanced standing. 4 hours lecture and 1 hour drill each semester.
Fall and Spring

M. S. 7 & 8. *Second Year Advanced, General Military Science* *6 credits*

A comprehensive study of the following: Logistics; operation to include, command and staff, combat orders, military intelligence, the military team and training management; military administration and military justice; service orientation to include, the role of the United States in world affairs, leadership, and officer indoctrination, school of the soldier and exercise of command. Prerequisite: MS 5 and 6. 4 hours lecture, 1 hour drill each semester.
Fall and Spring

DEPARTMENT OF MODERN LANGUAGES

Mr. Cimini, *Chairman*; Dr. Kucas, Mr. McKenna, Mr. Mann, Mr. Mastri

The Modern Language Department undertakes:

1. to give the student who plans to pursue studies in business, science, the arts or the professions the requisite skills for reading, writing and speaking foreign languages.

2. to train the student in logic and precision of thought and expression by comparative study of his own and foreign languages.

3. to develop the aesthetic and critical faculties of the student by the reading and appreciation of the best foreign authors.

4. to give the student an insight into the evolution of European thought and the history and culture of Europe as reflected in its literature.

At the beginning of the freshman year a placement test is given to students offering two years or more of high school credit in a modern language. Students passing this test will be admitted to the intermediate course in that language. Students failing in this test, and students admitted with less than two units in a language, are required to take the elementary course in that language.

FRENCH

French 1 & 2. *Elementary French* *6 credits*

A course designed to impart a solid foundation in grammatical principles and the mastery of a basic vocabulary; reading and composition, especially written.
Fall and Spring

French 21 & 22. *Intermediate French* *6 credits*

A course which includes a review of French grammar and an introduction to French literature and civilization by the reading and discussion of appropriate works.
Fall and Spring

French 104 & 105. *Seventeenth Century French Literature* *6 credits*

Authors of the 17th century are read and discussed. A study is made of the classical movement in French thought and culture, with emphasis given to such authors as Corneille, Racine, Moliere and Boileau. Course conducted in French.
Not offered 1956-1957

French 110 & 111. *History of French Literature* *6 credits*

The main lines of the evolution of French culture as seen in the literature of the country from the twelfth century to the contemporary period, the whole studied against the background of the aesthetic, philosophical, political, social and economic development of European civilization in general.
Fall and Spring

French 112. *Undergraduate Research Thesis in French Literature* *1 credit*

Open to students of proven ability in French. Assignment of the problem to be arranged in each case. Prerequisite: French 21 or equivalent.
On request

French 115 & 116. *History of French Civilization* *6 credits*

A course given jointly by the Departments of Modern Languages and of History; the study of the rôle of France in the political, economic, social and intellectual development of the West. If conditions warrant, this course may be given in English.
Not offered 1956-1957

French 117 & 118. *Eighteenth Century French Literature* *6 credits*

The course of the French Enlightenment from the *libertins* to the Revolution.
Not offered 1956-1957

French 119 & 120. *Nineteenth Century French Literature* *6 credits*

The main currents of French literature and thought from the romantic reaction to the emergence of symbolism.
Not offered 1956-1957

French 123 & 124. *Advanced French Grammar and Conversation* *6 credits*

A course which includes: a thorough study of French grammar; composition, oral and written, free and by translation from the English; study of the inter national phonetic alphabet and practice in public speaking in French.
Fall and Spring

French 125. *Scientific French* *3 credits*
A course desgned to prepare the student for library research in French in the fields of the biological and physical sciences. Readings. This course may be conducted in English.
On request

French 133. *Methods of Teaching Modern Languages* *3 credits*
A course given in conjunction with the Department of Education; this course may be given jointly to stndents of any of the modern languages. Under such conditions it will be conducted in English.
Not offered 1956-1957

GERMAN

Germ. 1 & 2. *Elementary German* *6 credits*
A complete course in the fundamentals of the German language. Emphasis on reading of graded texts, with written, oral and aural exercises.
Fall and Spring

Germ. 21 & 22. *Intermediate German* *6 credits*
Reading from modern authors of moderate difficulty. Oral and written exercises. Systematic review of German grammar. Prerequisite: See general introduction.
Fall and Spring

Germ. 101 & 102. *Advanced German* *6 credits*
Selected texts in prose and poetry. Advanced practice in conversation and composition.
Not offered 1956-1957

Germ. 103 & 104. *Scientific German* *6 credits*
The aim of this course is to give the preprofessional and science student a general, well rounded knowledge of Scientific German. Readings are selected from the fields of Physiology, Botany, Zoology, Chemistry and Physics, and take on the aspect of a survey of general science, thus preparing the student directly for further work in German in his own particular field.
On request

SPANISH

Span. 1 & 2. *Elementary Spanish* *6 credits*
Aim: solid foundation in grammatical principles and mastery of a basic vocabulary. The course includes intensive drill in pronunciation, active use of vocabulary and grammatical principles in written and oral exercises.
Fall and Spring

Span. 21 & 22. *Intermediate Spanish* *6 credits*

Aim: increased facility in active use of basic grammar and vocabulary, enlarged reading ability, and an introduction to Spanish and Spanish-American civilization. The course includes grammatical review, written and oral composition, reading of selected modern prose of intermediate difficulty. Prerequisite: Span. 1 & 2.
Fall and Spring

Span. 101 & 102. *The Modern Novel* *6 credits*

A study of the short story and novel of Spain and Spanish-America in the late 19th and early 20th centuries. Readings in the most important authors, with background lectures on the history of the novel and discussions in Spanish.
Not offered 1956-1957

Span. 103. *Advanced Grammar and Composition* *3 credits*

A grammar review emphasizing advanced topics and the idiomatic use of Spanish in set themes and free compositions, with the aim of developing the ability to write clear and fluent Spanish.
Not offered 1956-1957

Span. 104 & 105. *Commercial Spanish* *6 credits*

A study of vocabulary and forms used in commerce. Practice in writing of letters and other business forms. Reading of Spanish models as a basis for free composition. Oral practice in Spanish.
Not offered 1956-1957

Span. 106 & 107. *The Golden Age* *6 credits*

A study of the development of the novel, with the culmination of all forms in Cervantes; and of the drama, reaching its perfection in Lope de Vega and Calderon. Readings in the major authors.
Not offered 1956-1957

Span. 108. *Conversational Spanish* *3 credits*

A course designed to enable the student to express himself in Spanish with clarity and fluency. Stress placed on pronunciation, idiomatic use of the language, and practice in oral composition. Course conducted in Spanish.
Not offered 1956-1957

ITALIAN

Ital. 1. *Elementary Italian* *3 credits*

This course is intended for those who begin Italian in college. Principles of Italian grammar, practice in reading, writing and speaking Italian. Its aim is to enable students to read ordinary Italian with ease and to understand to some extent the spoken language.
Fall 1956

Ital. 2. *Elementary Italian* *3 credits*

Continuation of Italian 1, which is prerequisite to this course.
Spring 1957

Polish

Polish 1. *Elementary Polish* *3 credits*

A solid foundation in grammatical principles and the mastery of a basic vocabulary. The course includes intensive drill in pronunciation, active use of vocabulary and grammatical principles in written and oral exercises, reading and composition in modern Polish.
Fall 1956

Polish 2. *Elementary Polish* *3 credits*

Continuation of Polish 1, which is prerequisite to this course.
Spring 1957

Polish 21. *Intermediate Polish* *3 credits*

Increased facility in active use of basic grammar and vocabulary, enlarged reading ability, and an introduction to Polish and Polish-American civilization. The course includes grammatical review, written and oral composition, reading of selected modern prose of intermediate difficulty. Prerequisite: Polish 1 and 2, or equivalent.
Not offered 1956-1957

Polish 22. *Intermediate Polish* *3 credits*

Continuation of Polish 21, which is prerequisite to this course.
Not offered 1956-1957

Russian

Russ. 1. *Great Russian* *3 credits*

Principles of the grammar of the Great Russian dialect, official language of the U.S.S.R. The new orthography and grammatical modifications introduced since the Bolshevik revolution will be followed. The object is to obtain a speaking and writing knowledge of standard Russian, with some practice in reading the Russian Classics.
Not offered 1956-1957

Russ. 2. *Great Russian* *3 credits*

Continuation of Russian 1, which is prerequisite to this course.
Not offered 1956-1957

Russ. 21. *Intermediate Russian* *3 credits*

Selected readings from modern Russian authors and practice in conversation, with the aim to increase facility in vocabulary and idiomatic expression.
Not offered 1956-1957

DEPARTMENT OF PHILOSOPHY

Fr. Sponga, S.J., *Chairman*; Fr. Henderson, S.J., Mr. Holden, Fr. Jarvis, S.J., Mr. Moran, Fr. McNicholas, S.J., Fr. McSorley, S.J., Mr. Netter, S.J.

The aim of education is to equip the student with a mature, reflective and receptive outlook on life. Philosophy's role in pursuing this goal lies in providing, as far as man's reason can, a comprehensive view of the basic structure and meaning of reality. Philosophy is at once distinct from the positive sciences in its methodology and at the same time it provides the integrating principles whereby man can properly interpret the universe in which he lives. Consequently the philosopher must be able to think clearly and express himself accurately. But he must also possess an intelligent appreciation of all the major attempts by man to answer his perennial questions. The broad principles of the Scholastic tradition will be proposed as the point of departure and rational framework for that ideal total wisdom which is docile to every manifestation and revelation of the true and the good.

Students wishing to major in Philosophy must take the Philosophy courses required of all students, and in addition Philosophy 113-114, History of Philosophy; and Psychology 121, Experimental Psychology, for a total of 34 semester hours. Since required courses constitute 26 hours of this major students majoring in Philosophy must carry a second major, fulfilling departmental requirements as listed.

Phil. 101. *Introduction to Philosophy* *3 credits*

Aristotelian Logic — The first prerequisite of the philosopher is correct thinking. Logic is a normative science concerned with the constitutive elements of thought and the laws that govern their correct use. Consequently logic analyses the nature and kinds of ideas (especially universals) and judgments. It then provides the rules for the proper use of these elements in immediate inference and in deductive and inductive reasoning. A view of the common logical fallacies arms one against them.
Fall 1956

Phil. 102. *Metaphysics I* *2 credits*

The student enters philosophy with a study of the structure of finite beings. This is presented, as it was historically to the Greek Cosmologists, in the form of the problem of change on its various levels. The attributes of material beings, extension, quantity, space and time require analysis in this context.
Fall 1956

Phil. 103. *Metaphysics II* *2 credits*

The structure of finite beings is further analyzed from the point of view of the historic problem of the "One and the Many" in the orders of existence and essence and in the notion and properties of being.
Spring 1957

Phil. 104. *Natural Theology* *3 credits*

The problem of the source of finite beings leads logically, as it did historically, to the question of the existence of God and of His relation to and activity in the world. Prerequisite: Phil. 101.
Spring 1957

Phil. 105. *Philosophy of Man I* *4 credits*

The philosophical consideration of man begins with the delineation of the philosophic as contrasted with the scientific study of man. Throughout, the two disciplines will be kept clearly distinct but, for the total picture of man, an integration of the two will be sought. This course will study life in general, its nature and origin, and plant and animal life in particular. The specific study of man will begin with a study of human sense life and an empirical study of man's rational life. Prerequisite: Phil. 102-103.
Fall 1956

Phil. 107. *Philosophy of Man II* *2 credits*

A. Human Rational Life — This course will study man's suprasensual powers, the intellect and will and freedom of choice. The nature and attributes of the human soul itself will complete this analysis of the constitution of man. Finally, man will be viewed integrally in the study of him as a person. The psychoanalytic theory and the experimental approach to character will be assessed and the philosophical implication of human personality will be explored. Prerequisite: Phil 105.
Spring 1957

Phil. 108. *Philosophy of Man III* *2 credits*

B. Man's Knowledge of Reality — This treatise will be considered the climax of our philosophical program. In treating the problem that has given modern philosophy of its distinctive character, it will afford a point of contact and integration of the student's training in Scholastic Metaphysics and Psychology with the philosophical environment prevalent today. The epistemological problem is complex, for man has various types or levels of cognition. The nature, validity, and interrelationship of these different levels is *the* philosophical question today and one's ability to differentiate and evaluate the hierarchy of sciences in the unity of consciousness marks his philosophical maturity. Descartes, Kant, Comte are some of the key figures in the understanding of the various types of realism, idealism, empiricism, logical posi-

tivism and scientism which must be assessed in their relation to Scholastic Philosophy. Prerequisite: Phil. 107.
Spring 1957

Phil. 110. *Philosophy of Human Conduct I: Ethical Theory* *4 credits*

In pursuit of a philosophical validation of the ethical fact, this course will, as a preliminary, study the purpose of human existence and the nature and constitution of responsible human action. Ethics properly concerns itself with the standard of moral goodness and evil and of moral obligation. This latter involves an understanding of the nature and properties of the natural moral law. The relations of moral law to concrete acts entails a study of conscience and virtue. A consideration of the nature of rights and duties affords a link with applied ethics. Prerequisite: Phil. 102-103-104.
Fall 1956

Phil. 111. *Philosophy of Human Conduct II: Individual and Social Ethics* *4 credits*

The philosophy of human conduct is here applied to the activities of individuals and societies. This entails, firstly, a consideration of the moral implications of man's relation, primarily viewed as an individual, to God as the object of religion and to himself as a being equipped with a variety of powers. Since it is difficult to isolate any human conduct from society, the final and largest section of this course will concern itself specifically with man as a social being. The nature and origin of society in general and the societal character of marriage will receive due treatment. Emphasis will be placed on civil society, its origin, authority, and extension. This will also entail laying the ground principles of morality for the various professional fields and for industrial problems. The question of international community will complete the picture. Prerequisite: Phil. 110.
Spring 1957

Phil. 113. *History of Philosophy: Ancient and Medieval* *3 credits*

A survey of the History of Philosophy from its beginnings in the West to its Scholastic flowering in the Middle Ages. The various problems will be seen in their origins and traced through the master philosophers; Socrates, Plato, Aristotle, St. Augustine, St. Thomas Aquinas.
On request

Phil. 114. *History of Philosophy: Modern and Recent* *3 credits*

The development of modern thought, from Bacon and Descartes, through Spinoza, Leibnitz, Hobbes, Locke, Berkeley and Hume to Kant and Hegel. Neo-Scholasticism and its relation to other contemporary philosophical movements.
On request

Phil. 115. *Philosophy and Management* *4 credits*
The course is designed as a survey of philosophy with particular emphasis on the science of correct thinking, as applied to labor-management relations. No prerequisite.
Not offered 1956-1957

Phil. 116. *Principles of Business Ethics* *3 credits*
Fundamental moral principles and their application in business and industry. Prerequisite: Phil. 115.
Not offered 1956-1957

DEPARTMENT OF PHYSICS

Dr. Harper, *Chairman*; Mr. Duffy, Mr. McGinnis, Mr. McPherson

The science of Physics is concerned principally with matter and energy, the nature of each, and with their interactions. It is the fundamental science for most branches of engineering and has innumerable applications in medicine, industry and every-day life. The objectives of the Department of Physics are: (1) to impart a body of knowledge of the general principles of Physical Science and to show their applications to human problems; (2) to aid the student in acquiring scientific method and in developing a quantitative frame of mind in dealing with his problems; (3) to train the student in logical and accurate methods of observation, measurement and analysis; (4) to provide the student with adequate training in the fundamentals of Physics to enable him to pursue medical, engineering and other courses of study; (5) to encourage and train those students who show exceptional aptitude for the science of Physics for a career in the teaching of Physics, or in industrial work in this field, and to encourage those students who have the capacity to pursue graduate work in Physics.

Phys. 1. *General Physics* *4 credits*
A fundamental college course in mechanics and heat. For pre-medical, pre-dental and other students who need one year of college physics. Three hours lecture and recitation and two hours laboratory. Prerequisites: Math 11 & 12.
Fall 1956

Phys. 2. *General Physics* *4 credits*
A continuation of Physics 1, including electricity and magnetism, sound and light. Three hours lecture and recitation and two hours laboratory. Prerequisite: Physics 1.
Spring 1957

Phys. 3. *General Physical Science—Physics* *3 credits*
This is the first part of a general physical science course for the non-science student designed to give an understanding of physical phenomena and the

methods of science and to show what contributions the physical sciences have made to human progress. The subjects of measurements and observations, properties and forms of matter, and forms and transformations of energy are treated from the standpoint of physics. Student participation in laboratory exercises and demonstrations will supplement the lecture material. Two hours lecture and two hours laboratory and demonstrations per week.
Fall 1956

Phys. 11. *Elements of Physics* *4 credits*

A basic college course in mechanics and heat, designed for physics and electronics majors in which methods of the calculus are applied. Three hours lecture and recitation and two hours laboratory. Corequisite: Math. 21.
Fall 1956

Phys. 12. *Elements of Physics* *4 credits*

A continuation of Physics 11, including sound, light, electricity and magnetism. Methods of Calculus are used. Three hours lecture and recitation and two hours laboratory. Prerequisite: Physics 11; Corequisite: Math. 22.
Spring 1957

Phys. 18. *Elementary Mechanics* *4 credits*

An elementary treatment of the statics and dynamics of particles and rigid bodies, elastic bodies, hydrostatics and hydrodynamics. For engineering students. Three hours lecture and recitation and two hours laboratory. Prerequisite: Math. 13.
Spring 1957

Phys. 19. *Elementary Heat, Light and Sound* *4 credits*

Basic treatment of the effects of heat, thermometry, calorimetry, transfer of heat and elementary thermodynamics; periodic motions, vibrating bodies, sound waves and acoustics; photometry, reflection and refraction of light, interference, polarization, color and spectra. For Engineering students. Three hours lecture and recitation and two hours laboratory. Prerequisite: Physics 18.
Fall 1956

Phys. 20. *Elementary Electricity and Magnetism* *4 credits*

Basic treatment of magnetism, electrostatics, direct currents and circuits, electromagnetic induction, alternating currents and circuits, electrical machines and devices, electromagnetic waves; introductory electronics and atomic physics. For Engineering students. Three hours lecture and recitation and two hours laboratory. Prerequisites: Physics 18; Math. 12.
Spring 1957

Phys. 101. *Heat and Thermodynamics* *3 credits*

An intermediate course covering the topics of conduction, convection and radiation, the first and second laws of thermodynamics, entropy, thermodynamic cycles, the steam engine, refrigeration, thermodynamic functions and applications of thermodynamics; practice in the use of steam tables and charts. A brief treatment of kinetic and statistical theory of gases is included. This course is recommended for Physics majors. Three hours lecture and recitation. Prerequisites: Physics 12 or 19; Math. 22.
Spring 1957

Phys. 102. *Mechanics* *3 credits*

An introduction to theoretical mechanics which deals with the statics and dynamics of particles and extended bodies. It covers the topics of motion of bodies under the influence of conservative and dissipative forces, momentum and energy relations, theory of potential, generalized co-ordinates and Lagrange's equations of motion. This course is required of physics majors. Three hours lecture. Prerequisites: Physics 11, or 18; Math. 101.
Spring 1958

Phys. 103. *Light and Optics* *4 credits*

A second course of light which treats geometrical and physical optics in greater detail than in the elementary courses. The topics include lenses and mirrors, refraction of light at surfaces, dispersion, lens combinations, optical instruments, spectra, interference, diffraction and polarization. The laboratory exercises are to acquaint the student with the handling and use of optical instruments in making optical measurements. Three hours lecture and three hours laboratory. Required of Physics and Electronics majors. Prerequisites: Physics 12 or 19, and Math. 22.
Fall 1956

Phys. 104. *Electricity and Magnetism* *4 credits*

An analytical treatment of electrical and magnetic theory including the topics of electrostatic fields, direct electric current circuits and measurements and magnetism. Required of Physics majors. Three hours lecture and two hours laboratory. Prerequisites: Physics 12, or 20; Math. 101 (can be taken concurrently).
Spring 1957

Phys. 104E. *Introduction to Electromagnetics* *4 credits*

A one-semester intermediate electricity and magnetism course designed particularly for the electronics majors including the topics of electrostatic field theory, magnetic fields, Maxwell's equations and applications to electromagnetic wave propagation. This course is required of Electronics majors. Three hours lecture and two hours laboratory. Prerequisites: Physics 12; Math. 110.
Fall 1956

Phys. 105. *Electricity and Magnetism* *4 credits*

A continuation of Physics 104. The topics include electromagnetic induction, transients, alternating current circuits and measuring instruments and electromagnetic fields and waves. Required of Physics majors. Three hours lecture and two hours laboratory. Prerequisites: Physics 104; Math. 101.
Spring 1957

Phys. 106. *Electron Tubes and Circuits* *4 credits*

The fundamental course on electron tubes and circuits. General principles of vacuum tube operation; power supplies and filters; electron tube characteristics; simple amplifiers; general amplifier theory; tuned circuits. This course is required of Electronics majors and recommended as an elective for the Physics majors. Three hours lecture and two hours laboratory. Prerequisites: Physics 12, or 20; Math. 22.
Fall 1956

Phys. 107. *Electron Tubes and Circuits* *4 credits*

A continuation of Physics 106. Power amplifiers, analytical and graphical methods; oscillators, modulators and detectors; radio and television circuits; computer circuits; theory and applications of transistors. Three hours lecture and two hours laboratory. This course is required of Electronics majors. Prerequisite: Physics 106.
Spring 1957

Phys. 108. *High Frequency Electromagnetic Wave Transmission* *4 credits*

Transmission of UHF signals; characteristics of transmission lines; theory of UHF measurements; electromagnetic wave theory. For Electronics majors. Three hours lecture and two hours laboratory. Prerequisites: Physics 107; Physics 104E (may be taken concurrently); Math. 101.
Fall 1956

Phys. 109. *Microwave Theory and Circuits* *4 credits*

Theory of microwave transmission through waveguides; microwave tubes and signal generators; microwave measuring instruments, receivers and transmitters; radar systems. For Electronics majors. Three hours lecture and two hours laboratory. Prerequisites: Physics 108; Math. 110.
Spring 1957

Phys. 110. *Modern Physics* *3 credits*

A mathematical treatment of various phases of modern Physics which includes the topics of kinetic theory, electrical discharges in gases, electron theory, atomic structure, atomic spectra, x-rays and other electromagnetic radiations. This course is required of Physics majors. Three hours lecture. Prerequisites: Physics 12 or 20; Math. 101.
Fall 1956

Phys. 111. *Modern Physics* *3 credits*

A continuation of Physics 110. This course is devoted to the treatment of quantum theory, photoelectricity, radioactivity, nuclear particles, nuclear reactions, induced radioactivity, nuclear instrumentation and cosmic rays. This course is required of Physics majors. Three hours lecture. Prerequisite: Physics 110.
Spring 1957

Phys. 112. *Sound* *3 credits*

An intermediate course which correlates principles and techniques of sound, light, electricity and mechanics. Vibration theory, wave transmission in different media, interference and diffraction and acoustic impedance are some of the topics illustrating this interrelationship. Reflection and absorption of sound waves; reproduction of sound, and loudspeakers. Architectural acoustics. This course is required of Electronics majors. Three hours lecture. Prerequisites: Physics 12 or 20; Math. 101.
Spring 1957

Phys. 114. *Advanced Physics Laboratory* *1 credit*

This course includes experiments, not included in other courses, such as the charge and specific charge of the electron, thermionic emission, gaseous discharges, photoelectric emission and atomic spectra. Required of Physics majors. One three hour laboratory period. Prerequisites: Physics 103, 104 (may be taken concurrently).
Fall 1956

Phys. 115. *Advanced Physics Laboratory* *4 credits*

A continuation of Physics 114. The experiments include thermoelectricity, radiation and thermal conduction, x-rays, radioactivity measurements and nuclear reactions. For Physics majors. Prerequisites: Physics 110 and 114.
Spring 1957

Phys. 120. *Undergraduate Physics Thesis* *1 credit*

For those who apply for the B.S. degree with a major in Physics. This work is to evaluate the student's capacity for individual study and research in connection with a specific physical problem. Assignment of the problem and credit to be arranged in each case. Prerequisites: 24 credits in Physics; 20 credits in Math.
Spring 1957

DEPARTMENT OF SOCIAL SCIENCES

Mr. Baldi, *Chairman*; Mr. O'Keefe, Mr. Schneck, Mr. Sheehan, Mr. Scully, Mr. Walsh

Purpose: To provide both terminal and prospective graduate students with a basic understanding of the sociological and economic forces which are a part of the structure of our society. The Economics courses are intended

for all Social Science majors and Business Administration majors. Courses in Sociology are intended for all Social Science majors. Within the Sociology major there is an opportunity for those interested in social work to follow a pre-professional orientation to the field.

A major in Economics shall consist of Economics 23 and 24, 25 and 26, plus 18 elective credits in Economics, including Bus. 103, 104, 105, 106.

A major in Sociology shall consist of Sociology 21 and 22, plus 18 to 21 elective credits in Sociology. Certain Psychology courses may be substituted for some of these elective credits with the authorization of the Chairman of the department.

ECONOMICS

Econ. 23. *Principles of Economics* *3 credits*

An introduction to the principles of economic theory and their application to present day problems. Economic organization of the U. S.; consumption, production and marketing, money and credit, prices, wage theories, and the relation of employer and employed, capital and interest, rents, profits and taxation.
Fall 1956

Econ. 24. *Principles of Economics* *3 credits*

Continuation of Econ. 23. Analysis of national income and spending, monetary and fiscal policies as an aid to controlling business cycles; foreign exchange and trade, analysis of modern capitalism and alternative economic systems. Prerequisite: Econ. 23.
Spring 1957

Econ. 25. *Financial Statement Analysis* *2 credits*

Meaning and purpose of accounting; detaailed study of balance sheet, profit and loss statements, business papers and negotiable instruments, work sheet and summary statements. Open only to Economics majors. Prerequisite: Econ. 24.
Fall 1956

Econ. 26. *Financial Statement Analysis* *2 credits*

Continuation of Econ. 25. Partnership formation and operation, financial statements of partnerships; partnership dissolution and liquidation, organization and operation of corporations. Detailed study of classification and accounting procedures, capital stocks, bonds, mortgages, sinking funds and reserves. Analysis and interpretation of corporate financial statements. Prerequisite: Econ. 25.
Spring 1957

Econ. 102. *History of Economic Thought* *3 credits*

This course is a survey of the wide field of economic thought. Particular stress is placed on the economic and socio-political factors of the time. Prerequisite: Econ. 24.
Fall 1956

Econ. 103. *Economic Geography* *3 credits*

A study of the physical environment which in a large sense sets the stage for all economic activities. Specifically, the influence of climate, land forms and soils and their distribution on the surface of the earth are investigated. Emphasis is placed upon the relation of physical factors and economic conditions to the production and exchange of the world's leading commercial products. The North American, South American and European continents are studied, with emphasis being placed on their relationship to the United States. Prerequisite: Econ. 24.
Spring 1957

Econ. 104. *American Economic Development* *3 credits*

The background of European expansion in America. The American Revolution as a social movement. The economic forces that conditioned the development of the United States prior to 1860. The economic basis of Southern Secession and the breakdown of the confederacy. The economic aspects of the reconstruction policy, agriculture and agrarian discontent. The emergence of large-scale enterprise and its attendant problems. The development of the United States as a major world power. The economic and social problems of World War I and the post-war period. The great depression, boom, World War II and post-war inflation periods and problems of current significance. No prerequisite.
Fall 1956

Econ. 105. *Labor Law and Legislation and Industrial Relations* *3 credits*

The study of the economic forces which have engendered labor legislation, and a case analysis of the effect of resulting conditions on employer-employee relations. A survey of the Acts of Congress of the United States and of the legislature of the Commonwealth of Pennsylvania in the field of industrial relations. Evolution of legislation, the history of industrial disputes and the influence upon labor-management relations. Summary of the history, theory and evolutions of labor combinations. Management as evidenced by Federal and State legislation and court decisions. Early doctrines. Structure and purpose of labor combinations. Labor injunctions. Lawful and unlawful striking and picket activity. The Clayton Act. The Norris-LaGuardia Act. Prerequisite: Econ. 24.
Fall 1956

Econ. 106. *Labor Law and Legislation and Industrial Relations* *3 credits*

Continuation of Econ. 105. The Boycott. Labor and the Sherman Act. The National Labor Relations Act. The Railway Labor Act. Incidents of union membership. State laws. The Fair Labor Standards Act. Prerequisite: Econ. 105.
Spring 1957

Econ. 107. *Labor-Management Relations* *3 credits*

A study of the rights, as well as the problems, of the employer and the employee, together with their reciprocal duties and responsibilities both to themselves and to the public. An evaluation of the views, the tested methods, the experiences, and the practices of companies which have been successful in building up such relationships. A survey of the changes resulting from economic conditions, legal decisions, and past as well as current legislation. This course is designed to correlate theories and practices into an integrated system of Labor-Management Relations, in their social, political, psychological, and economic aspects. Prerequisite: Phil 116 and Econ. 104.
Spring 1957

Econ. 150. *Labor Problems* *3 credits*

History of labor as a social and economic group; development and philosophy of trade unions; labor legislation; methods of dealing with insecurity and inadequate income; organizational and jurisdictional problems of unions; labor-management relations. Each student will complete a project applying a definite phase of the course to an assigned problem.
Spring 1957

SOCIOLOGY

Soc. 21. *Basic Sociology* *3 credits*

An introduction to basic sociological principles covering the basis, structure, and functions of society. Man's biological and cultural heritage and his social nature, demography, ecology, types of communities; the social processes of competition, conflict, co-operation, accommodation and stratification and their relationship to social control, the family, economic, governmental and religious institutions.
Fall 1956

Soc. 22. *Social Problems* *3 credits*

An analysis of the major social problems affecting modern society. Poverty dependency, physical illness and handicaps, mental deficiency, mental and emotional illnesses, problems of old age, family breakdown, transiency, housing, crime and delinquency, standards of living and race problems. Social

legislation bearing on the above, resources for treatment and prevention, and deficiencies in existing programs.
Spring 1957

Soc. 23. *Introduction to the Social Sciences* *3 credits*
This course seeks to synthesize for the student the various social sciences. It covers the nature and development of man, his society, culture and influence of physical environment; the family, rural and urban communities, racial and cultural groups, social problems and agencies of control, economic principles and practices; the role of government and public and private finance of social welfare programs. Not open to Social Science majors.
Fall 1956

Soc. 103. *Criminology and Penology* *3 credits*
Contributions of the various schools of thought to the development of the science of criminology. Physical, psychological and environmental factors in crime. The role of the home, family and social relationships.
The methods and instrumentalities of criminal justice, the police, courts, prisons, probation and parole will also be discussed, as will a program of crime prevention.
Not offered 1956-1957

Soc. 104. *Social Origins* *3 credits*
A survey of the present state of knowledge in the field of cultural anthropology. Analysis of the modern primitive cultures for the light they shed on the possible stages in man's cultural acquisitions. The social, economic, religious and political structures and processes in various contemporary primitive societies and the corresponding structures and practices in modern civilization.
Not offered 1956-1957

Soc. 105. *Sociological Theories* *3 credits*
A survey of the development of sociological principles beginning with Comte and including a comparison of the modern major schools of thought such as the mechanistic, geographical, demographic, biological, economic, sociologistic and integrative.
Spring 1957

Soc. 106. *Community Organization* *3 credits*
The course aims at a general introduction to the field and process of community organization, both as a field of social work, and as a field of human endeavor. Stress is laid on the co-ordination and financing of welfare activities, methods of appraising community needs and resources, welfare planning and the initiation of welfare services. Local, state, regional, national and international services of a voluntary and governmental nature will also be discussed.
Spring 1957

Soc. 107. *Child Welfare* *3 credits*

Philosophy and development of child welfare in the United States. Educational, health, recreational and child labor regulations. Study and treatment of dependent, neglected, delinquent and illegitimate children in their own homes, foster homes and institutions. The administration of child care and protective programs on Federal, State and local level will also be studied.
Fall 1956

Soc. 109. *The Field of Social Work* *3 credits*

Growth of social work as a professional endeavor. The scope of social work; case work in the medical, psychiatric, family and child welfare and guidance field; community organization as exemplified in the community chest and council, social research, social planning, social group work. Evolution of training for social work. Schools of social work, national associations, number of social workers, demand for social workers, salaries. Current trends in social work.
Spring 1957

Soc. 110. *Marriage and Family Life* *3 credits*

This course is intended to cover the practical problems of every day living encountered in marriage and family living. The major focus of attention will be given to the preparation for marriage, selection of a partner, financing the marriage, harmonies and discords in the marriage, problems of parenthood and family administration, family crises and ways of meeting them, and the successful and happy marriage and family union. Restricted to seniors.
Fall 1956

Soc. 111. *Urban Sociology* *3 credits*

A sociological analysis of the development and effects of modern urbanization on human institutions, population trends and social relationships. The external interrelationships, form and structure and organized life in cities, patterns of urban structure and cities of the future. The role of politics, social agencies and elements making for organization and disorganization.
Fall 1956

Soc. 112. *Methods and Techniques of Social Research* *3 credits*

Ways of obtaining, recording, interpreting, and publishing research materials; the case study, life history, survey, questionnaire, interview, and the use and interpretation of statistical procedures.
Not offered 1956-1957

Soc. 113. *Juvenile Delinquency* *3 credits*

Juvenile delinquency as a social problem. Methods of treatment and prevention, including juvenile courts, clinics, probation, parole, correctional institutions, child placement and recreational programs.
Not offered 1956-1957

Soc. 114. *American Minority Groups* *3 credits*

A study of the cultural background distribution, assimilation and other adjustments of minority groups; along with a survey of the problems arising from the contacts of these people who differ as to race and culture. The concepts of prejudice and discrimination as opposed to the democratic ideology will be considered. This course is an attempt to arrive at an understanding of the American race problem and sociological approaches to the reduction of intergroup hostility.
Fall 1956

Soc. 120. *Special Problems* *1 credit*

General prerequisites, senior standing, sociology major, and permission of the instructor. Done on an individual basis. Assigned readings, individual research, informal conferences and written reports. Individual has choice in field of sociological study.

A. Sociological theory
B. Race relations
C. The family
D. Research methodology
E. Criminology and Penology
F. Anthropology
G. Social Psychology
H. Educational sociology
I. Social Organization

Fall 1956

DEPARTMENT OF THEOLOGY

Fr. Herlihy, S.J., *Chairman*; Fr. Hammett, S.J., Fr. Nash, S.J., Fr. Osterle, S.J., Fr. Trundle, S.J.

The program in theology at the University of Scranton has been organized upon the fundamental principle that theology is something vital, which must be lived as well as understood. It is not intended to train theologians but rather to form thoroughly enlightened and strongly motivated Catholic gentlemen, bent upon attaining their full stature in the Mystical Body of Christ.

Theol. 1. *The Quadriform Gospel* *2 credits*

The origin and literary type of the Gospels, source books of Christian origins, their historical and religious value. The structure, content and characteristics of each of the four Gospels in its entirety.
Fall 1956

Theol. 2. *The Life of Christ* *2 credits*

The life of Christ and the work He came to accomplish as revealed in a harmony of the Gospels, with commentary. The manifestation of the Divine Person Who is God and Man. Emphasis on His teaching and redemptive missions and His example as a model of Christian personality.
Spring 1957

Theol. 21. *Theology of the Incarnation and the Redemption* *2 credits*

The creation, Elevation, and Fall of Man; the Incarnation and its redemptive purpose studied theologically both from Tradition and Sacred Scripture; Mariology, the Sacrifice of the Cross, and the Sacrifice of the Mass studied dogmatically and liturgically; participation in the priesthood of Christ through Baptism, Confirmation and Holy Orders.
Fall 1956

Theol. 22. *The Organization and the Inner Nature of the Church* *2 credits*

Origins of the Church as depicted in the Gospels, the Acts of the Apostles, and St. Paul's Epistles to the Corinthians, Colossians, Philippians, and Ephesians. Function of the Church as the continuation of the Incarnation of Christ; its constitution, its teaching office, and the sources of its teaching. The inner nature of the Church as the Mystical Body of Christ, and the role of the Holy Spirit, its Soul, as seen in the scriptural sources and the Papal Encyclicals and the Mystical Body of Christ. A survey history of the Church with particular emphasis on the views of Protestant denominations concerning the nature of the church of Christ.
Spring 1957

Theol. 111. *The Theology of the Individual* *2 credits*

Man's progress towards God; Divine Providence; the Indwelling of the Holy Spirit in the just; actual and habitual grace; infused virtues and gifts. The teaching of St. Paul on justification in the epistles to the Romans and Galatians. The salvific will of God, and the universality of His grace. Predestination. The nature of efficacious grace. The grace of Final Perseverance. Penance, Indulgences, Extreme Unction. The four last things, with emphasis on the Beatific Vision, and its object, the Triune God.
Fall 1956

Theol. 102. *The Spiritual Formation of Laymen, and their Participation in the Apostolate* *2 credits*

Catholic dogmatic truths concerning Christian perfection applied to the life of laymen with the aim of promoting their spiritual life and their participation in Catholic Action:

(1) The nature of Christian perfection and the obligation of striving for it. The theological virtues, especially Christian charity, and its exemplification by Christ; also the moral virtues, and the relation of natural virtues to supernatural. Practical aspects of the theology of the Sacraments of Penance and the Eucharist. The ascetical practice of mortification and penance, techniques for resisting temptations, methods of prayer, the invocation of angels and saints, Catholic devotions.

(2) The Theology of Catholic Action. The modern role of laymen as mediators between the temporal and spiritual orders, consequent on the rise of Liberalism and Secularism. The collaboration of the laity and the clergy in the Apostolate of Christ. The stages of the lay Apostolate, and the practical organization and method of Catholic Action.
Spring 1957

Theol. 110. *The Catholic Philosophy of Religion* *2 credits*

The fact, the universality, the nature, and the origins of Religion. The multiplicity of religions, and of religious errors. The validity of religious knowledge natural and supernatural, and the criteria of supernatural revelation. The evidence for the genuinity, integrity, and historicity of the Gospels, and of the claims of Christ regarding Himself. The continuity of the Roman Catholic Church with the "Primitive" Christian Church, and its development in the organization and doctrine.
Fall 1956

Theol. 111. *Christian Marriage: The Church and the Social Order* *2 credits*

(1) The Divine Institution, the essential properties, and the Sacramentality of Christian Marriage; its blessings (Children—love—holiness). The errors and vices opposed to it. Morals for the married, and the Canon Law of the Church concerning marriage.
(2) The Christian social, economic, and cultural program in the temporal order, chiefly as enunciated in the Papal Encyclicals and other pronouncements on topics such as the family; education; relations between Church and State; ownership, property, labor, security, wages; religious toleration, and interdenominational relations, etc.
Spring 1957

Religious Organizations

LEAGUE OF THE SACRED HEART

The League of the Sacred Heart and Apostleship of Prayer is the oldest organization at the University of Scranton; it was founded in 1906 and at that time aggregated to the central office of the League. Membership is open to all Catholic students. The League has for its purpose to foster among its members a sincere devotion to the Sacred Heart and, by the union of its members in prayer, to make reparation for sin and promote the apostolic work of the Church. Regular meetings are held on the first Friday of the month at 8:45 A. M.

Moderator: Reverend Gordon Henderson, S.J.

THE SWORDSMEN

The Swordsmen (The Sodality of Our Lady), under the primary title of the Immaculate Conception and with Saint Aloysius as its secondary patron, was founded at the University of Scranton on December 6, 1942, with the approval of the Bishop of Scranton and subsequently aggregated to the Roman Prima Primaria Sodality. Its object is to foster filial devotion to the Mother of Christ and the practice of virtue and piety among its members.

They conduct the Annual Mission Bell Dance for the benefit of the Jesuit Missions in India. They sponsor the May Devotions held on the campus. They operate a pamphlet rack. They hold discussions on Mariology in conjunction with Marywood College. They teach catechism in eight parishes around Scranton. They act as promoters of the League of the Sacred Heart and the Apostleship of Prayer. They keep the University informed of the pictures approved by the Legion of Decency.

Moderator: Reverend Gordon Henderson, S.J.

Assistant Moderator: Reverend Paul J. Casey, S.J.

Prefect Senior Sodality: Robert R. Newton

College Organizations

PURPOSE

The University of Scranton encourages extracurricular organizations as important factors in collegiate life, developing the social side of a student's character, exercising his abilities and furnishing opportunities for the development of initiative and leadership. These activities are part of the life of the collegiate community and ought to be part of the life of every student. Therefore, every student will be urged to participate in one or more of these activities to the extent that his scholastic standing will permit.

ALPHA SIGMA NU

Alpha Sigma Nu is a National Honor Society with chapters in various Jesuit Colleges and Universities throughout the United States. It is a society organized to honor students who have distinguished themselves in scholarship, service and loyalty to their college. Candidates are drawn from the Junior Class and are nominated by the local chapter, which also certifies the qualifications of the nominees. Those who are approved by the President of the University and the Dean are elected members and initiated into the organization.

Moderator: Reverend William G. Kelly, S.J.

President: Robert R. Feeney

ALUMNI SOCIETY

The University Alumni Society has been formed to perpetuate friendships formed at the University, to foster among its members a spirit of loyalty to their Alma Mater and to extend the influence and advance the interests of the University. Regular meetings and reunions are held from time to time as prescribed in the rules and by-laws of the Society.

Honorary President: Right Reverend Monsignor Patrick J. Boland.

President: Mr. James G. Hopkins.

First Vice-President: Attorney James E. O'Brien.

Second Vice-President: Mr. Cyril E. Kane.

Secretary: Mr. John R. Gavigan.

Treasurer: Attorney Robert E. O'Brien.

Executive Secretary: Mr. John R. Gavigan.

Moderator: Reverend Frank McG. Nugent, S.J.

THE AQUINAS

The Aquinas is a newspaper published twice a month during the course of the school year by the students of the University. Its purpose is to foster the development of literary expression among the students, to afford a practical training in Journalism and to chronicle the events of University life.

Moderator: Mr. John Moran

Co-Editors: Joseph D. Nicola and William Keisling

ATHLETIC ASSOCIATION

General Policies

The University of Scranton engages in intercollegiate athletics because of a deep conviction that when properly administered they are an integral part of the total educational services of the institution. The University encourages and offers the opportunity of participation in intercollegiate athletics to all students. The academic life of the boy is primary importance and his athletic life is secondary. Intercollegiate athletics must not be developed to the exclusion of a representative intramural program. Our institution abides by both the statement of policies and principles and the rules of eligibility of the N.C.A.A. and the E.C.A.C. for the conduct of intercollegiate athletics.

Objectives

1. To improve students physically and develop qualities of leadership.

2. To bind together the student body, stimulate school spirit and instill into the student a desirable sense of loyalty.

3. To integrate the athletic program with the general public relations of the University.

4. To arrange and play an intercollegiate schedule commensurate with Scranton's size, academic standards, aspirations and principles and policies.

5. To integrate the athletic program with the general University program so that there is a balance between the focus of

attention on athletic events and the focus of attention on other types of events.

Faculty Moderator: Reverend John P. McNicholas, S.J.
Coach of Football and Director of Physical Education: Mr. Peter A. Carlesimo
Coach of Basketball: To be selected
Coach of Baseball: Peter A. Carlesimo

THE ART CLUB

The Art Club affords an opportunity to participate in real art experiences. The students learn the use of the various art media and enjoy a weekly studio period for the production of original works. Appreciation of the artistic endeavor of today is acquired through visits to museums and through the sponsoring of art exhibitions at periodic intervals.

Moderator: Mr. Lawrence A. Mann.
President: Maurice Leon

THE AVIATION CLUB

The purpose of this club is to increase the knowledge of and interest in aviation, and to promote social contact among the students having a common interest in aviation. The Aviation Club functions throughout the school year and is open to all interested students.

Moderator: Mr. Andrew W. Plonsky
President: Paul Spillane

THE UNIVERSITY BAND

The University Band is open to any student with an aptitude for music. The band plays at many of the athletic contests, various University exercises and gives an annual concert. Active members in the band are eligible for the school letter after one year and the gold award after two years.

Moderator: Mr. John D. Sweeney, S.J.
Director: Mr. Mario Chemi

BIOLOGY CLUB

Junior and Senior students who are majoring in Biology may, by the demonstration of interest and proficiency in the subject, become members of the Biology Club. This organization enables the students more intensely interested in the biological sciences to further their own education especially in the fields which are not covered in classroom work. The members meet every second week for student discussion of current biological topics and, in addition, engage in various projects for the benefit of the department, the school and the community.

Moderator: Dr. Leonard Wolf.
President: Joseph Noto

THE BUSINESS CLUB

The University of Scranton Business Club is an organization composed of graduates and students of the University who are interested in Business Administration and Accounting. The object of this club is to give the business student closer contacts with actual business practices and to acquaint him personally with both local and national business executives and firms.

Meetings are held each week in the Business Building and each month a dinner meeting is held at which prominent guest speakers from the fields of business and economics are presented to the club. Field trips to local and distant industries are another activity of this organization.

Moderator: Mr. John P. McLean.
Associate Moderator: Reverend Gordon Henderson, S.J.
President: Thomas Foley

UNIVERSITY OF SCRANTON CHAPTER

STUDENT AFFILIATES, AMERICAN CHEMICAL SOCIETY

To keep abreast of developments and improve their perspective in the ever-growing field of chemistry, undergraduates in the chemistry major curriculum became affiliated with the American Chemical Society, a national professional organization, thereby gaining recognition collectively as the University of Scranton Chapter of Student Affiliates.

Objectives of the organization are: to encourage in the broadest and most liberal manner the advancement of chemistry in all branches; to promote research in chemical science and industry; the improvement of the qualifications and usefulness of chemists through high standards of professional ethics, education and attainments; the increase and diffusion of chemical knowledge; and by its meetings, professional contacts, and reports to promote scientific interests and inquiry.

Moderator: Mr. Umbay Burti
Chairman: Anthony Witkowski

COUNCIL OF DEBATE

The University of Scranton Council of Debate offers its members the opportunity to train themselves in public speech and informal debate. Besides the regular weekly debate at the University, the debaters present a program each Thursday over Station WQAN, in which they discuss topics of vital interest to the world. Other activities of the Council of Debate are intercollegiate debates and the annual oratorical contest. The Council is a member of the NFCCS and the National Forensic Commission.

Moderator: Reverend William H. Osterle, S.J.
President: Donald Walutes

DEUTSCHER KREIS

The Deutscher Kreis is open to all students at the University who are particularly interested in increasing their proficiency in the use of the German language and in acquiring a better understanding of the culture and civilization of the people whose language they are studying.

Moderator: Dr. Antanas Kucas
President: Joseph Cardamone

THE ECONOMICS CLUB

This organization restricts its membership to students who are majoring in Economics. Its objective is to promote interest in economic theory and problems by providing the opportunity for discussion groups to function most profitably. In addition, the

group plans to sponsor field trips and to conduct economic research projects of general as well as of local interest.

Moderator: Mr. Thomas Sheehan.
President: John Comerford

LE CERCLE FRANCAIS

Le Cercle Francais is open to all students of the University who are particularly interested in increasing their proficiency in the use of French language and in acquiring a better understanding of the culture and civilization of the people whose language they are studying.

The club activities stress the importance of French culture in the development of modern society. Weekly meetings conducted in French are devoted to discussions of various phases of French civilization and literature. The Cercle encourages the exchange of letters with French and Canadian correspondents, thereby cementing friendly relationship between countries. The Cercle also sponsors occasional guest speakers.

Moderator: Mr. John McKenna
President: Nello Papi

THE GREEK CLUB

The Greek Club is an academic organization open to all the students of the University. Its purpose is to acquaint its members with various phases of Greek culture in their relationship to present-day civilization. The club affords a fine opportunity of supplementing one's education with a study of the rich culture of ancient Greece, the cradle of Western civilization.

Moderator: Mr. John D. Sweeney, S.J.
President: Robert Newton

INTERNATIONAL RELATIONS CLUB

The International Relations Club was founded in 1938 in order to promote a more intensive study of international problems and to gain a clearer understanding of international relations. Open forum discussions are held twice each month and occasional radio broadcasts are given by members of the forum. Joint meetings with the Marywood International Relations Club are held

periodically. The forum is affiliated with the international relations clubs of the Carnegie Foundation for International Peace.

Moderator: Mr. Frank C. Brown
President: John Finegan

THE LOYOLANS

The Spanish Club is an organization composed of students of the University who are interested in the study of Spanish. The objectives of the club are to acquaint the members with the written and spoken language and to study the life, literature and culture of the Spanish-speaking countries.

Meetings are held monthly in the Arts Building. Several social gatherings are held during the scholastic year. The annual Spanish Fiesta is the organization's outstanding social event of the year.

Moderator: Mr. Frank A. Cimini.
President: Thomas Conway

RESIDENT STUDENTS' CLUB

Founded in 1947, this club is designed to aid the student from out of town in supplementing the regular extracurricular activities at the University with special programs of an intellectual, artistic or social nature to meet his special needs.

Moderator: Francis Nash, S.J.
President: John Wall

THE PERSHING RIFLES

The Pershing Rifles is a national ROTC society with member companies in various colleges and universities throughout the United States. The society was formed at the University of Nebraska in 1892 by Lt. John J. Pershing from whom the society has since taken its name. The aims of the society are to encourage, preserve and develop the highest ideals of the military profession and to promote American Citizenship.

Company "R," located at the University of Scranton, was granted a charter in April, 1953. Membership is open to any ROTC cadet who has the necessary scholastic and leadership

ability. The local unit sponsors a drill team and the Annual Military Ball.

Moderator: Major Albert F. Leister, Jr.

Company Commander: Cadet Sgt. Donald J. Padden

THE PHILOSOPHY CLUB

The Philosophy Club was established as the outgrowth of informal gatherings of students interested in philosophical subjects. Informal discussions are held at the club meetings as a means of helping the members acquire a knowledge of and a facility in speaking about philosophical subjects. While any interested student of the University may become a member, practically all members are Juniors or Seniors, since the philosophy courses are given in those years.

Moderator: Reverend Richard McSorley, S.J.

President: Steve Rabel

THE PHYSICS CLUB

The Physics Club is primarily an organization for those students who are majoring in the science of Physics. The membership is also open to those who are studying Physics and wish to extend their understanding of this science. The purpose of the Physics Club is to afford the members opportunities to become more familiar with the activities of physicists, the applications of physical principles and the outstanding developments in the field of physics.

Moderator: Dr. Joseph P. Harper.

President: John Alpaugh

UNIVERSITY PLAYERS

The Undergraduate Dramatic Society of the University of Scranton is the University Players, under whose sponsorship the program of University Dramatic Productions on stage and radio is presented. Membership in the University Players is restricted to students who have taken active part in the annual productions on stage and radio. Freshmen serve as apprentice members during their first year. Actual participation in the program of productions, however, is not limited exclusively to members of the

University Players, but is open to all students of the University Day and Evening classes. Meetings of the University Players are held twice monthly and consist of a planned program of lectures and discussions on playwriting, stagecraft, production and design.

Moderator: Reverend John J. Quinn, S.J.

President: (To be elected)

POLITICAL SCIENCE CLUB

The Political Science Club is composed of students who are actively interested in the nature, functions and problems of our American government. It conducts seminars and debates on current issues and runs model legislatures, both state and national. The emphasis is on active student initiative and participation on projects that are real issues for the country at large.

The club is affiliated with the Intercollegiate Conference on Government which is composed of representatives from all the major institutions of higher learning in the Commonwealth of Pennsylvania. Each year the Conference sponsors a meeting of all its units, usually in Harrisburg, where the students simulate model legislatures, model constitutional or nominating conventions, or model United Nations Assembly. In addition radio forums and joint meetings with other northeastern colleges are sponsored by the club.

Moderator: Mr. Timothy Scully

President: Gerald Chichurka

THE PSYCHOLOGY CLUB

The Psychology Club affords an opportunity for students majoring in psychology, and others interested in the problems of the field, to meet periodically. Meetings generally feature guest speakers, psychological films or demonstrations, field trips, etc. At least one dinner meeting is held annually. The club maintains an up-to-date file of approved graduate schools in psychology, and publishes a mimeographed newsletter of club activities. Only psychology majors may hold office, but any students are welcome as members.

Moderator: Mr. Paul J. Lilly

President: Eugene Riley

THE UNIVERSITY SINGERS

The University Singers affords students with sufficient vocal talent an opportunity to develop this talent with practice in choral singing. During the year the University Singers appear in connection with various University exercises and give occasional concerts. Active members in the Glee Club are eligible for the school letter after one year and the gold award after two years.

Moderator: Mr. John D. Sweeney, S.J.
Director: Norbert K. Betti.
President: Robert Feeney

SOCIAL SCIENCE CLUB

The purpose of this organization is to afford students an opportunity to participate in recreational and group activities with institutionalized children and adults; to perform sociological research of benefit to the community; to broaden the student's training in the social sciences.

Moderator: Mr. John J. Baldi.
President: Rocco Policare

STUDENT COUNCIL

The management of extracurricular and social activities at the University is placed in the hands of the Student Council. The range of its duties includes the preparation of the social calendar, the running of assemblies, the supervision of elections, the initiation and promotion of all kinds of student endeavor and the observance of college traditions.

The Student Council is composed of the President of the student body, the class presidents, a representative of each extracurricular activity, a moderator and an assistant moderator. Regular weekly meetings are held for the conduct of ordinary business.

The Student Council is a member of the National Federation of Catholic College Students and the National Student Association.

Moderator: Reverend William Cavey, S.J.
President: Thomas J. McHugh

THE WINDHOVER

The Windhover is the annual Year Book publication of the students of the University. Its aim is to serve as a record of the school year and as a memorial of the Senior Class.

Moderator: Reverend Edward J. Sponga, S.J.
Editor: Donald J. Kemple

THE RADIO GUILD

The University of Scranton operates its own non-commercial educational FM broadcast station, WUSV, which recently moved into newly designed and equipped studios atop the new Science Building. Fully equipped with modern broadcast equipment, including auxiliary amplifiers and recorders for remote pick-ups, the radio station serves as the focal center of the Radio Guild, a student organization which staffs and operates the station as announcers and engineers under faculty direction. Students serving on the Radio Station are selected by examination after apprenticeship training and find this extracurricular experience a valuable training facility for communications work. Full membership in the Radio Guild entitles the student to wear the lapel insignia of WUSV.

Moderator: Reverend R. F. Grady, S.J.
Chief Engineer: John P. McGoldrick, B.S.
Student Manager: Harold J. Swift
Secretary: Charles Volpe

Scholarships

Among the many needs of the University none is of more importance than the foundation of scholarships to meet the increasing number of requests from students of exceptional ability, who without financial aid are unable to secure the advantages of a college education. To found a full scholarship requires the sum of $15,000; partial scholarships can also be established by smaller gifts. Each scholarship will bear and perpetuate the name of the donor or the person designated by him. All scholarships, full or partial, are accepted with the understanding that the income from the sum will be the amount applicable to the holder of the scholarship.

Applications for all non-competitive scholarships must be in the hands of the Scholarship Committee by April 1st. The application forms may be obtained in the local high schools from the Admissions Counselor of the University who visits these schools in the Fall or from the principals of these high schools. These forms are also obtainable from the Registrar's Office at the University.

To obtain a non-competitive scholarship, sufficient need must be established and the necessary scholastic ability manifested. For prospective Freshmen this aptitude is judged on the basis of their position in their class in the Senior year of high school and from the results of the aptitude and content tests administered by the Guidance Department of the University. Upperclassmen are judged on their quality point index. The applicant will also be required to appear for a personal interview before the Scholarship Committee sometime in April or May. The decision of this Committee is final. Any non-competitive scholarship grant is made for only one year at any time. The student must re-apply each year. Students holding a partial scholarship will pay the amounts their scholarships fall short of the full tuition. Books, fees, boarding and other incidental expenses are not included in any scholarship. The following scholarships are available:

COMPETITIVE SCHOLARSHIPS

The University of Scranton offers ten (10) scholarships to high school graduates of highest ability and achievement. These

scholarships range in value from $1600 to $800, and are awarded on the secondary school record, the Principal's recommendations and on the results of competitive examinations given in the spring semester under the following plan:

A. For the initial screening of all competitors a single test of scholastic aptitude will be given in the various high schools. This examination requires no special preparation. It is approximately one hour in length and is a test of linguistic and quantitative aptitude. On the basis of these test scores the one hundred highest-ranking students are determined.

B. The one hundred students selected under part A are given a general achievement test battery for final selection. Finalists are determined on the basis of the ten highest aggregate scores on this battery.

Announcement of the winners will be made as soon as possible after the completion of testing and the ten scholarships distributed as follows:

First Award: A Four-Year Scholarship worth $400 a year. Total value—$1,600.

Second Award: Two Four-Year Scholarships, each worth $300 a year. Total value—$2,400.

Balance: Seven Four-Year Scholarships, each worth $200 a year. Total value—$5,600.

The retention of the scholarship is conditioned upon a maintenance of a B average.

Interested students from schools not visited by a scholarship representative may obtain further details by consulting your high school principal or writing to the Registrar of the University.

PURPLE CLUB SCHOLARSHIPS

The Purple Club is an organization dedicated to providing educational opportunities for deserving young men from the Lackawanna Valley. Annually they provide partial tuition assistance totaling approximately $8000 to over thirty young men. Application should be made to the Registrar.

THE MARTHA FITCH SCHOLARSHIP FUND

Through the generous bequest of Miss Martha Fitch, a fund in excess of $300,000, the income of which is to be used to assist

in defraying tuition expenses for students who manifest need and ability, has been made available.

WORK SCHOLARSHIPS

Tuition aid in amounts up to half tuition. The student is assigned to assist in various University departments. Over fifty (50) such scholarships are granted annually.

LEADERSHIP GRANTS

These are partial scholarship grants awarded those who manifest need, the required intellectual ability and outstanding qualities of leadership.

THE FOWLER AND WILLIAMS SCHOLARSHIP

This grant is made by the company of that name and consists in two full scholarships for one year. Each year it is given anew.

STUDENT LOANS

A University fund, from which loans for tuition are made to deserving students, normally in the upper classes. Loans carry an interest charge of 2% and are to be repaid by the student after completion of his education, beginning six months after gainful employment has been secured.

GIFTS AND BEQUESTS

Gifts to the University may take the form of funds for the establishment of scholarships or professorships; or the foundation of medals and other prizes; of additions to the material equipment; of collections of educational value; of contributions to the general fund, or may be undesignated. Those desiring to make a bequest to the University of Scranton may be helped by the following suggested form:

FORM OF BEQUEST

I give (devise) and bequeath to the University of Scranton, an institution incorporated under the laws of the Commonwealth of Pennsylvania and located in Scranton, Pennsylvania, and its successors forever the sum of..... ....dollars (or otherwise describe the gift) for its general corporate purposes (or name a particular corporate purpose).

ANNUAL COMMENCEMENT
UNIVERSITY OF SCRANTON

JUNE FIFTH
NINETEEN HUNDRED FIFTY-FIVE

PROGRAM

PROCESSIONAL MARCH—Pomp and Circumstance.....*Elgar*

STAR SPANGLED BANNER .....Audience

INVOCATION—Veni Creator .....The Graduates

CONFERRING OF HONORARY DEGREES

SELECTION—L'Italian in Algieri .....*Rossini*

PRESENTATION OF CANDIDATES FOR DEGREES IN COURSE

In the Graduate Division, Dean, Herbert S. J. Baum, S.J.
In the College, Dean, Herbert S. J. Baum, S. J.

CONFERRING OF DEGREES IN COURSE BY THE PRESIDENT
OF THE UNIVERSLTY

SELECTION—Bitter Sweet .....*Noel Coward*

CONFERRING OF COMMISSIONS
Department of Military Science and Tactics

ADDRESS TO THE GRADUATES Honorable Michael J. Eagen, LL.D.

BENEDICTION
His Excellency, The Most Reverend Jerome D. Hannan, D.D.
Bishop of Scranton

RECESSIONAL MARCH—Stars and Stripes .....*Sousa*

HONORARY DEGREES

DOCTOR OF HUMANE LETTERS
Most Reverend Jerome D. Hannan, D.D.

— ★ —

DOCTOR OF LAWS
Abraham Barey Cohen
Honorable Michael John Eagen
Edward James Lynett
John Boyle McDade
Reverend Adrian J. M. Veigle, T.O.R.
Honorable Albert Leisenring Watson

— ★ —

DEGREE CANDIDATES — JUNE, 1955

MASTER OF ARTS
MAJOR: EDUCATION

Christian Louis Addimanda
The History of Secondary Schools and Vocational-Industrial Education in the Greater Pittston Area Prior to 1954

Paul Peter Ball
A History of the McAdoo, Pennsylvania, Public Schools

Robert James Demer
A Proposal for the Inclusion of Fundamental Legal Concepts in the Curriculum of Secondary Schools of Pennsylvania

Edwina Butler Doud
A Comparative Study of the Relationship of High School Graduation Rank to Class Standing in a Junior College

Joseph J. Gulla
A Survey of Certain Features of the Bookkeeping Departments of the Third and Fourth Class School Districts in Luzerne County, Pennsylvania

Helen Catherine Hines
A Survey of Guidance Practices in Schools of Northeastern Pennsylvania at the Junior High School Level

John Paul Hudyck
The Relationship of Measured Interests and Level of Aspiration to Achievement of Senior High School Students

Theodore Mando
A Comparison of Reading Growth Between the Sexes in the Eighth Grade: 1953-1954

Michael M. Minor
De La Salle's Place in the History of Education

Mary Agnes Mulcahy
A Critical Analysis of the Effectiveness of Language Instruction on the Learnings and Abilities of Second Grade Children

William George Pacropis
The Validation of a Forced-Choice Rating Scale Administered to High School Seniors

Mary Richardson Parker
Character Training in the Public School Districts of Lackawanna County

Jack Delbert Reese
The Curriculum at Luzerne County Industrial School for Boys

Mary Douglas Rhinelander
The History and Development of Correspondence Instruction

Eugene E. Schimelfenig
A History of Parochial Education in Lackawanna County, Pennsylvania

Carl Louis Sylvester
An Evaluation of the Effectiveness of Advisement of Veterans Under Public Law 550 in the Veterans Administration, Wilkes-Barre, Pennsylvania, Regional Area from September, 1952 to December, 1953

John Yonkondy
A Study of Safety Practices Among Member Schools of the Eastern Pennsylvania Football Conference

MASTER OF SCIENCE

MAJOR: EDUCATION

Grace Gibbon Arnott
William George Beddoe
Clarence Wellington Bergen, Jr.
Joseph Patrick Brislin
John Patrick Caslin
Edward Francis Chiampi
Joseph Dermott Cleary
John Francis Curran
Anna Mae Gilmartin
John Stanley Glooch
Emmanuel Horowitz
John E. Koniszewski
John C. Ludgate
Joseph Cyril Mawn
Katherine Anne McDade
Thomas Joseph McHale
Andrew Joseph Merrick
Andrew Louis Miklus
Francis Aloysius Moran
Daniel Patrick O'Dea
Mark L. Ryan
Alex Joseph Rynkiewicz
Frank Martin Salva
John Francis Shea
George Joseph Shendock
Harold Allen Smaltz
Marion Theresa Spellman
John Joseph Werwinski

BACHELOR OF ARTS

MAJOR: CLASSICS AND LITERATURE

Joseph Robert Bollard
Francis Xavier Duffy
Robert Joseph Hanlon
William Francis Higgins
William Patrick Joyce, *Cum Laude*
Walter Joseph Kanavy
Frank Leo McDonough, Jr., *Cum Laude*
Richard Lester Meneeley
Thomas Patrick Quinn
William Judson Stoddard
Harold Joseph Sullivan, *Magna Cum Laude*
Ronald Louis Terranella, *Cum Laude*
Joseph William Walsh
George Julius Zimmerman

BACHELOR OF SCIENCE

MAJOR: ENGLISH AND SOCIAL SCIENCES

Richard Anesko, *Cum Laude*
Robert Michael Bessoir
William John Bevelock, *Cum Laude*
Thomas Joseph Brown
Carlo John Celli
Walter David Conrad
Ray Gilbert Cordelli
John Michael Cuff
Richard Joseph Cummings
John Anthony Donovan
Francis D. Doran
John Joseph Durkin
Stanley Joseph Exeter
Americo Joseph Fedele
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DEPARTMENT OF MILITARY SCIENCE AND TACTICS

Wesley A. Keyson, Lt. Colonel, U.S.A.

Commandant, Army Reserve Officers' Training Corps

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